SUMMER NUMBER, 1919.

Vol. XXXVI. *No.* 136.

GENERAL LIBRARY
SEP 17 1919
UNIV. OF MICH.

THE BRISTOL MEDICO-CHIRURGICAL JOURNAL

PUBLISHED UNDER THE AUSPICES OF

THE BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Editor: P. WATSON-WILLIAMS, M.D.,

WITH WHOM ARE ASSOCIATED

LACY FIRTH, M.S., M.D., JAMES SWAIN, C.B., C.B.E., M.S., M.D.

J. A. NIXON, C.M.G., B.A., M.D., *Assistant Editor.*

Editorial Secretary: J. M. FORTESCUE-BRICKDALE, M.A., M.D.

CONTENTS.

	Page
The Systematic Examination of the Abdomen. By R. G. P. LANSDOWN, M.B., B.S. Durh.	33
Postgraduate Study. By J. M. FORTESCUE-BRICKDALE, M.A., M.D., M.R.C.P.	48
The Operative Findings in Thirty Cases of Gunshot Injury of Nerves, with Remarks on Diagnosis, Localisation, and the Technique of Operation. By C. A. MORTON, F.R.C.S.	55
Reviews of Books	81
Editorial Notes	87
The Library of the Bristol Medico-Chirurgical Society	93
Meetings of Societies	100
Obituary Notice: BARCLAY JOSIAH BARON, KNIGHT	100
Local Medical Notes	103

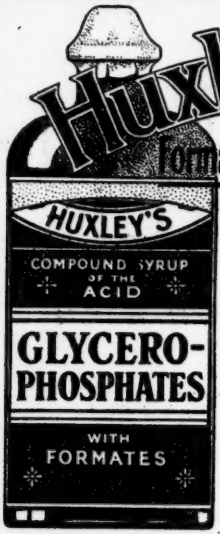
BRISTOL: J. W. ARROWSMITH LTD.

LONDON: SIMPKIN, MARSHALL, HAMILTON, KENT & CO. LTD.

Price One Shilling and Sixpence net.

Huxley's Syrup

Formates with Glycero-Phosphates



A bright ruby-coloured syrup or glycerolé, sugar-free, containing the acid glycero-phosphates and acid formates of lime, soda, potash, iron, manganese, and strychnine (5 grains of the combined salts with $\frac{1}{110}$gr. of strychnine glycero-phosphate per fluid drachm) flavoured with Seville or bitter orange peel. N.B.—Huxley's Syrup is also prepared without the formates, and without strychnine for children and others.

The formates have general tonic and stimulant effects, especially noticeable when used in conjunction with the glycero-phosphates in neurasthenoid or neurasthenic states, or in abnormal fatigue from over-exertion, mental or physical.

Sold in bottles of ½ lb. and 1 lb., and in W. qt. bottles for dispensing by all Dispensing Chemists. Free Sample from

Anglo-American Pharmaceutical Company, Ltd., Croydon (London).

PIPERAZINE—MIDY.

DISSOLVES 92% OF URATES.

Does not injure the kidney, heart or blood vessels.
Indicated in the routine treatment of

GOUT, LUMBAGO, SCIATICA, GRAVEL, STONE, &c.

Owing to the formation of nascent sodium citrate during effervescence of Piperazine—Midy it limits the production of urates by stimulation of hepatic activity.

MIDY, Pharmacien de 1re classe, PARIS.

AGENTS

Anglo-American Pharmaceutical Company Ltd.,
CROYDON (LONDON).

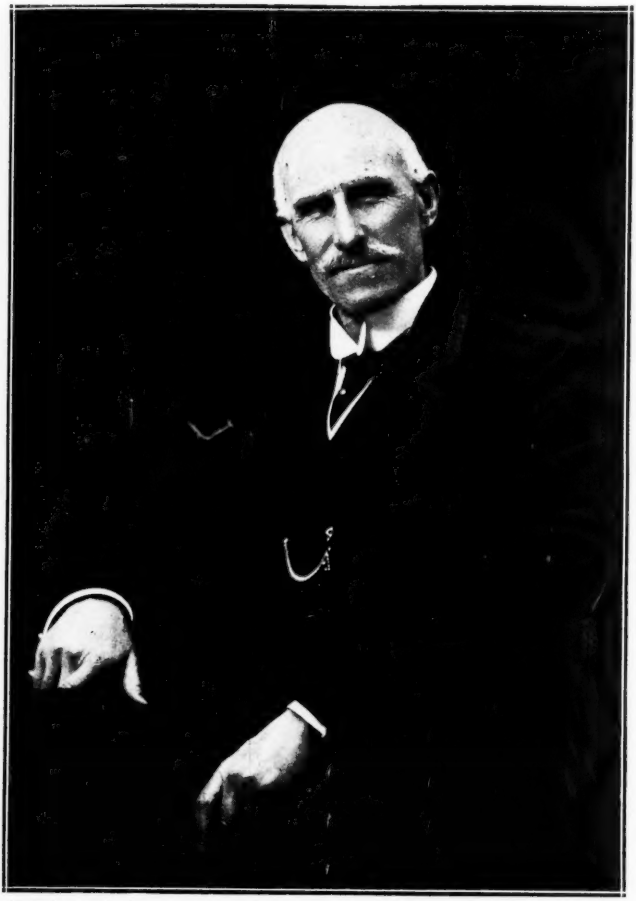


Photo. Swaine, London.

Barclay J Baron

The Bristol Medico-Chirurgical Journal.

"Scire est nescire, nisi id me
Scire alius sciret."

SUMMER NUMBER, 1919.

THE SYSTEMATIC EXAMINATION OF THE ABDOMEN.

The Presidential Address, delivered on December 11th, 1918, at the opening of the Forty-fifth Session of the Bristol Medico-Chirurgical Society.

BY

MAJOR R. G. P. LANSDOWN, R.A.M.C.T.,

Lecturer on Practical Surgery in University of Bristol; Surgeon to the Bristol General Hospital.

ALLOW me first of all to thank you for the honour you have done me in electing me to the Presidential Chair of your Bristol Medico-Chirurgical Society. It is a difficult thing for me to fill the chair with the distinction of many of my predecessors, but I have decided to address you on a subject which takes up much of my time and thought, one too which must perforce be of some interest to most members of our profession; for every physician, surgeon and general practitioner is being consulted on the subject every day of his life, and upon his knowledge of the subject depends the future comfort and oftentimes the life of his patient.

I have taken as the title of my discourse to-night "The Systematic Examination of the Abdomen," or "How to Arrive at a Correct Diagnosis in Surgical Diseases of the Abdomen."

My method is to carry out an examination on the following lines : I first obtain as complete a history as possible of the present illness, then any points in the past and family histories which bear any possible relation to the present illness, noting of course the patient's age and occupation.

The patient is then stripped sufficiently for the surgeon to examine the whole abdomen without being hampered by having to pull articles of clothing up or down during the examination, the patient then lies on a couch or bed with a small pillow under the head. It is always wise to let the patient rest for a few moments after lying down, this short time is occupied in examining the tongue, noting any odour with the breath, and counting the pulse rate.

With a good light on the abdomen it is then carefully inspected, and the amount and extent of ordinary breathing movements observed, the presence of any tumour or abnormal swelling noted.

Note any other departure from the normal contour of the abdominal wall, such as prominence or depression in any region, whether the whole abdomen appears distended or scaphoid, the condition of the umbilicus and its shape. The presence of any unusual movements are noted ; for example, the up and down movement of a tumour in the upper abdomen synchronous with respiration, visible peristalsis in one or more coils of the intestine or in the stomach, the exact site of origin and disappearance and the direction of the wave of contraction being noted.

If peristalsis is resulting from small intestine obstruction, it will be of the type spoken of as the ladder-rung variety, whereas if it is due to large intestine obstruction the peristalsis will be vertical in direction.

The presence of scars and their situation should be carefully noted. In cases of intestinal obstruction it is of great importance not to overlook scars in the skin, and to

inquire as to their origin, as adhesions beneath the skin-scar or in the neighbourhood of the organs involved at a previous operation may be the cause of the trouble.

Again, it must never be forgotten in cases of intestinal obstruction how important it is to examine all points where hernia may be found.

Percussion is next performed, the area of liver dulness noted, whether it be normal, increased, diminished or absent. The fact that liver dulness is present does not of necessity exclude the diagnosis of perforation of the stomach or duodenum. Total disappearance of liver dulness in such a case must depend on (1) the length of time that has elapsed since the perforation took place, (2) on the size of the original opening, and (3) upon the nature of that which first tries to escape from the opening.

I was once asked by the late Professor J. Michell Clarke to operate upon a young woman whose stomach had perforated half an hour before he saw her and made the diagnosis ; liver dulness was not diminished at all. At the operation, which was done within two hours of the occurrence of perforation, a piece of onion was blocking completely the orifice in the anterior wall of the stomach.

Crossing to the left of the middle line the splenic area is percussed ; both renal and iliac regions and the hypogastric region should be examined in the same way, noting any evidence of unusual dulness, and if necessary the patient should be rolled over on to the side to ascertain the presence or absence of shifting dulness. It is seldom worth while to waste time by trying to map out the outline of the stomach by percussion ; our ideas of its size and shape as mapped out by the combined methods of percussion and auscultation have been proved to be quite erroneous by the more accurate and scientific examination with the Röntgen Rays and the fluoroscope, after the ingestion of a bismuth or barium meal.

If there is any tumour in the epigastric region it should be noted whether it is dull or resonant on percussion.

Auscultation is of very little value in examining the abdomen. Occasionally it is useful in determining the presence of a patch of peritonitis or of locating the position of a stricture or narrowing of the bowel lumen.

The most important examination after inspection is that of palpation, and I do not think any of us live long enough to become as proficient in this form of examination as might be possible if we could continue with unflagging energy and intelligence beyond the time limit set by hospital authorities and the Almighty.

As in the examination of the female breast, so also in palpating the abdomen, it is possible to obtain the maximum of information by using the flat hand or the palmar aspects of the phalanges rather than the actual tips of the fingers. By use of the latter in any case suffering from an acute abdomen an unnecessary amount of pain is inflicted, and the examination is rendered more difficult therefore, as anything increasing pain will of necessity increase rigidity of the muscles. One of the most difficult things I know is to get the patient at times so to relax the abdominal wall as to allow of a thorough palpation being carried out; in an acute abdomen with perforation of any portion of the intestinal tract this is quite impossible. Within a few moments of perforation taking place the abdominal wall becomes board-like and scaphoid in shape, later becoming distended by slow degrees. These symptoms are of so grave a nature that the surgeon should be asked to see the case immediately.

I always palpate the regions of the abdomen in order, commencing in the right hypochondrium, travelling across to the left, then coming back to the right side, examining in transit the left renal, umbilical and right renal regions, then

from right to left again in the order right iliac, hypogastric and finally left iliac.

By this systematic method of palpation one is able to decide whether any particular region is more resistant than others, or whether guarding contraction of the muscles follows on examination in any one or more regions. The hand next grasps the loins in turn, the right hand is placed with the fingers over the right side of the abdominal wall and the thumb in the interval between the last rib and the crest of the ilium. When the patient takes a deep inspiration and forces the diaphragm down the hand may grasp a tumour, or a misplaced or enlarged viscus or portion of a viscus. Passing round to the other side of the bed or couch, the same examination is carried out on the left side, the left hand being used in exactly the same manner as was the right hand on the right side. Where it is not possible easily to pass to the other side of the bed, the left side can be examined by placing the right thumb over the left abdominal wall and the fingers in the loin.

In connection with examination by palpation, I must refer to the presence of hyperalgesia in abdominal disease, and say a few words of its importance in helping us to arrive at a correct diagnosis. An article appeared in *The Practitioner* of August, 1916, by David Ligat, giving the result of his investigations, conducted on the lines laid down by Sir James Mackenzie in *Symptoms and their Interpretation*. He considers that "all the pain that a patient complains of, and the tenderness that an observer can elicit, would seem to be due to a true *viscero-sensory reflex*, and not in any way to pain or tenderness felt in the organ itself. Various methods of eliciting reflex responses were tried by Ligat; that which he found to yield definite and demonstrative results he describes as follows: "Grasp the skin and subcutaneous tissue firmly between finger and thumb, and draw

them away from the deeper layers of the abdominal wall. If an hyperalgesic area be present the patient winces, and one can tell by the patient's expression when such an area is being stimulated."

After long and careful observation Ligat was forced to the conclusion that these points corresponded anatomically with the subcutaneous distribution of certain branches of particular nerves. The amount of pain in different cases varies very considerably. Where there is general evidence of acute inflammation of a viscus the pain produced by pinching up the skin may be elicited over a large area of skin, corresponding perhaps to two or even three spinal segments, but by carefully mapping out the point of maximum hyperalgesia the actual organ affected can generally be decided upon. In other cases where there is no evidence of acute inflammation and vague abdominal pain is the chief complaint, very careful examination is necessary, closely watching the alteration produced in the patient's facial expression when the skin is pinched up. It is in this type of case that I have myself found the greatest amount of assistance from this method of examination. The sensation produced is not always described by the patient as one of actual pain, it is frequently described as "pricking," "curious," "different from a similar pinch on the other side." This diagram copied from Ligat's paper gives a good idea of the different areas affected in different viscera. In all cases where I have to examine an abdomen I invariably test these areas for hyperalgesia.

There are three so-called "signs" recognised in connection with abdominal palpation associated with the name of those who first pointed out their value. They are :—

1. *The McBurney Sign.*—I quote from Kelly's monograph on *The Vermiform Appendix and its Diseases.* "As to the location of the pain as a significant factor in making a

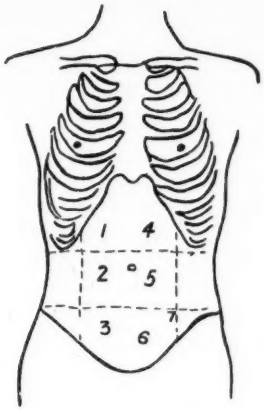


PLATE 1.—*Diagrammatic illustration of the hyperalgesic points.*

1. Hyperalgesic area when present in gall-bladder lesions. 2. In appendix lesions. 3. In right Fallopian tube lesions. 4. In gastric and duodenal ulcers. 5. In small bowel lesions. 6. In large bowel lesions. 7. In left Fallopian tube lesions.

PLATE 2.

Taken 4½ hours after ingestion of barium meal. Shows most of the meal in the small intestine, quite low down in the pelvis, and the head of the column in the ascending colon. There is a faint indication of the last few inches of ileum below and to the right of the sacro-iliac synchondrosis.

diagnosis of 'appendicitis,' the value of the 'McBurney point' is now so universally known that it is most interesting to read the first statements of the author relative to the matter. 'The exact locality of the greatest sensitiveness had seemed to me,' he says, 'to be usually one of importance. Whatever may be the position of the healthy appendices found in the dead house—and I am aware that its position when inflamed varies greatly—I have found in all my operations that it lay, either thickened, shortened or adherent, very close to its point of attachment to the cæcum. This, of course, must in early stages of the disease determine the seat of greatest pain on pressure. And I believe that in every case the seat of greatest pain, determined by the pressure of one finger, has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus. This may appear to be an affectation of accuracy, but so far as my experience goes the observation is correct.'"

2. *Murphy's Sign.*—Murphy wrote (in the *Medical News*, vol. i., 1903, p. 825): "The most characteristic and constant sign of gall-bladder hypersensitiveness is the inability of the patient to take a full inspiration when the physician's fingers are hooked up deep beneath the right costal arch below the hepatic margin. The diaphragm forces the liver down until the sensitive gall-bladder reaches the examining fingers, when the inspiration suddenly ceases as if it had been shut off. I have never found this sign absent in a case of calculus or in infectious cases of gall-bladder or duct disease." This last statement I can repeat as the result of observation in all cases of this kind that I have examined since I read his paper in 1903.

3. *Boas's Sign.*—Boas writes (*Munch. med. Woch.*, April 15th, 1903, p. 604): "Least recognised as a symptom of

cholelithiasis is tenderness over the posterior surface of the liver. When well marked it extends laterally from about an inch external to the spines of the vertebræ to the posterior axillary line, and vertically from the eleventh dorsal to the first lumbar spines. To demonstrate it the finger should be pressed against a point to the right side of the tenth dorsal spine; then against successive points in lines running horizontally outwards, opposite the other spinous processes, down to the first lumbar spine, first on one side, then on the other. This symptom, if present during the acute attack, is also invariably present in the intervals; that is, if once present it is always present, and is therefore of special diagnostic value in the later stages. Occasionally it may be found years after the last attack of colic. Conversely, if absent in the acute attack, it is not found in the intervals. It is usually sufficient to map out the areas of tenderness with the finger, but when there is a doubt as to whether the right side is the more tender, greater accuracy may be obtained with the faradic or galvanic current. When, as often occurs, the lower edges of the liver and the gall-bladder are not tender, the discovery of the second or third areas of tenderness may, in conjunction with other symptoms, often decide the diagnosis. The presence of one or more of these areas indicates also that though no attack of colic may have occurred for some time the patient still requires supervision and treatment."

Commenting on this sign, Sir Berkeley Moynihan says (*Gall-stones and their Surgical Treatment*, page 117): "I consider the search for the tender area a necessary part of the examination of all patients who suffer from gall-stone diseases, or in whom the existence of this disease is suspected. It is undoubtedly a sign of great value." I have myself used this sign in all cases of suspected gall-stone disease that I have examined since the end of 1904, and have only found

gall-stones present in two cases where I had not proved the presence of the tender areas. In association with the presence of hyperalgesia in the gall-bladder area, this sign is of the greatest possible value in helping us to arrive at a correct diagnosis in those cases where a difficulty exists in determining whether we are dealing with appendicitis or gall-stones, or a tumour in the right side of the abdomen. I have not found this sign present in a fair number of cases of malignant disease of the gall-bladder in which gall-stones were not demonstrated at operation.

I have noticed that in cases of adhesions of the gall-bladder involving the pylorus or the duodenum, and in cases of pyloric ulcer whether on the duodenal or gastric side of the pylorus, an area of tenderness similar to that obtained in Boas's sign is to be elicited over a corresponding area between the seventh and tenth thoracic spines vertically. This corresponds to the area of distribution of the cutaneous branches of the posterior divisions of the sixth, seventh and eighth thoracic spinal nerves. The area over which the sign described by Boas is obtained corresponds to the distribution of the cutaneous branches of the posterior divisions of the ninth and tenth nerves. If investigation is further pursued on these lines, we shall possibly find that there is a definite area of hyperalgesia obtained for diseases of the larynx, pharynx and œsophagus.

I should like here briefly to recite the notes of four cases which illustrate what I have just said about hyperalgesia, Boas's and Murphy's signs. They are as follows :—

Case 1.—Mrs. M., æt. 35, wife of a doctor, seen July 8th, 1916, at 8.30 p.m. Taken ill suddenly at 11.30 last night, with severe pain in the back ; 6 a.m., vomiting and repeated vomiting until 9 a.m. Has had two or three similar but less severe attacks every year for the last three or four years. Her father died at age of 74 of carcinoma of the liver, her mother at the age of 54 of cancer of the pancreas. In the right renal region is a sausage-

shaped tumour, quite hard and nodular, which passes up and disappears into the hepatic region. It comes down on deep inspiration. There is no area of resonance between the tumour and the liver edge. Gall-bladder hyperalgesia, Murphy's and Boas's signs are all present and very well marked. Eleven days later the gall-bladder was opened and drained, a large number of stones having been evacuated. The swelling had previously been diagnosed as a cancerous tumour of the ascending colon, on account of the hardness and of the situation.

Case 2.—Mrs. S., æt. 52, seen September 15th, 1916. There was a history of gall-stone colic followed by jaundice eight years ago and again last Christmas. Hyperalgesia was absent, but Boas's and Murphy's signs were both present and well marked. In the right hypochondrium, one inch to the right of the middle line, and half-way between the umbilicus and the ensiform cartilage, deep pressure always produced marked wincing; it is interesting to note that tenderness in that spot is frequently found in association with duodenal ulcer. She was operated on September 24th. Between the time of my first seeing her and of the operation she had passed two gall-stones. The gall-bladder was found adherent to the anterior abdominal wall, the transverse colon and the second portion of the duodenum. A fistula was existing between the gall-bladder and the duodenum, this accounted for the point of tenderness mentioned above. The gall-bladder and cystic duct were removed with stones *in situ*, the stones in the bladder and cystic duct were white and pearl-like in appearance.

Case 3.—Mrs. W. W. P., æt. 61, seen November 30th, 1916. Seven years ago had an attack of indigestion with pain in the upper abdomen, has had numerous attacks of niggling pain since. Some months ago found a difficulty in sitting forward, as something hard got in the way. A tumour was found by the medical attendant in the right side of the abdomen, which was not connected with the pelvis, and was thought to be a malignant growth in connection with the ascending colon. The bowel for the last thirty years has been relieved twice daily, and the motion has always been of a fluid consistency; there have never been any blood or mucus in the stools, and she has never been constipated. There is a large sausage-shaped tumour coming down from under the lower border of the right lobe of the liver, which comes down farther on taking a deep inspiration. There is no resonance between the tumour and the liver edge, no impulse into the loin, and no dilatation of the cæcum. No Boas's or Murphy's sign and no hyperalgesia present. A diagnosis of impaction of a gall-stone in the cystic duct with hydrocele of

the gall-bladder was made. The abdomen was opened on December 3rd, when a large distended gall-bladder partially covered by a Riedel's lobe was delivered, on raising which a stone was seen impacted in the cystic duct. The cystic duct was clamped and ligatured, and was removed with the gall-bladder *in situ*.

Case 4.—Mrs. C., æt. 56, seen January 20th, 1917. For some considerable time past has suffered from heart attacks; they had ceased for a time, but returned three weeks ago. She has had no vomiting, no diarrhœa, and no constipation. There is a tumour in the right hypochondrium extending from the rib margin to a point one inch below and immediately to the right of the umbilicus, the lower end of the tumour is stony hard and rounded. The edge of the liver can be felt on each side of the tumour, and is much lower than normal; indeed, that part of the right lobe which is external to the tumour almost reaches the iliac crest. There is no area of resonance between the tumour and the liver; there is no impulse into the loin and no dilatation of the cæcum. Boas's and Murphy's signs are both absent, but gall-bladder hyperalgesia is well marked. The diagnosis made was occlusion of the cystic duct by a stone, with probably a large stone at the distal end of a much distended gall-bladder. At the operation performed by the medical attendant on January 21st the condition found was exactly as described.

In almost all cases of abdominal disease it is a wise rule to examine the rectum as a routine procedure; in cases where the patient complains of suffering from piles or from hemorrhage from the anus, or of frequent diarrhœa or constipation or of the passage of mucus with the fæces, it is in my opinion criminal to neglect to carry out such an examination.

The presence or absence of a tumour in the pelvis should always be noted. I vividly recall one case some few years ago of a woman who was suffering from extremely obstinate constipation. I was asked to see the case with a view to remove the colon, another surgeon having stated that it was eminently a suitable case for that method of surgical treatment. I was supplied with a copy of very elaborate notes,

but on going through them very carefully before examining the patient was struck with the fact that no mention was made of any rectal examination having been made. I made a careful examination of the abdomen and then of the rectum ; the latter was absolutely blocked by a large, tender swelling in Douglas's pouch, which was diagnosed as, and at a subsequent operation proved to be, an adherent and inflamed ovarian cyst, removal of which absolutely cured the constipation.

Other methods of examination are also necessary in arriving at a correct diagnosis. We have before us usually an analysis of the urine in any case for investigation, whether abdominal or not. A blood count is sometimes helpful, as in distinguishing between Banti's disease and splenic leukæmia. It is useful sometimes also in cases where it has been difficult to decide whether suppuration has occurred, though it must never be forgotten that leucocytosis is by no means pathognomonic of suppuration.

Lastly, we have the more modern method of examination of the intestinal tract by means of a fluoroscope after the ingestion of a meal which is opaque to the passage of Röntgen Rays. This method of investigation is of the greatest possible value in coming to a correct diagnosis in chronic abdominal conditions ; but it is readily seen that it can be of very little assistance, if any, in that group of abdominal conditions which is now so generally spoken of as the acute abdomen.

If the fluoroscope is used in arriving at a correct diagnosis in abdominal disease, it is essential that the surgeon called upon to make the diagnosis should himself be present at the examination, and not expect the skiagraphist to supply him with three or four plates showing a bismuth meal at certain regions of the intestinal tract taken at certain times ; looked at *de novo* such plates can convey very little, if any, information to any man who was not present at the examination.

When the patient is on the X-ray table, and the surgeon is able to see the shadow cast by the meal, and at the same time by digital manipulation to separate different coils of intestine, or note the speed with which the meal is discharged from the stomach or reaches definite sites in the intestinal tract, or observe the absence or excess of peristalsis, he gains a large amount of knowledge which he would have lost had he relied upon the plates supplied. Provided the surgeon has been present at the examination, the plates of conditions he has actually seen are of the greatest assistance in refreshing his memory when proceeding to operate on the case or to write a report thereon. It is generally wise to see the patient in the erect as well as in the recumbent position, as the position of the different viscera vary both in health and disease according to the position of the trunk.

The following case illustrates well the difficulty of arriving at a correct diagnosis from skiagrams alone without personal examination of the abdomen with the fluoroscope or without making a thorough abdominal examination on the lines laid down in this paper.

T.P., male, æt. 30, was admitted on September 11th, 1918, with the diagnosis of gastro-enteritis, which was later changed to intestinal adhesions. On September 20th I was shown some plates (of which I am going to show the lantern slides) which had been taken by the skiagraphist, and which were accompanied by a report which stated that the "findings point to adhesions (?) at hepatic flexure." I asked to be allowed to examine the patient before being expected to express an opinion as to his diagnosis. I saw him on September 23rd. For ten years past he has suffered from severe attacks of abdominal pain, and for the past three years from attacks of vomiting and diarrhœa. The cæcum was dilated, tenderness was well marked at McBurney's point, appendicular hyperalgesia was present, and the rectum was loaded. I wrote down my deductions from the examination of the plates and the abdomen as follows :—

1. Adherent appendix, kinked.
2. Fixed caput cæci.

3. Jackson's veil round cæcum and ascending colon.

4. ? Ascending colon and first limb of transcending colon adherent together.

5. Centre of transcending colon adherent in left side of pelvis.

On September 24th he was operated on and the following findings noted :—

1. Adherent kinked appendix, removed.

2. This released a fixed caput cæci.

3. Large Jackson's veil all round cæcum and ascending colon.

4. At hepatic flexure the veil causes adhesion between upper two or three inches of ascending colon and first limb of transcending colon.

5. Centre of transcending colon fixed in left iliac fossa by overlying coils of small intestine.

The giants of medicine in the past who claimed Guy's as their Alma Mater, Bright, Addison, Wilkes, Moxon, and Mahomed, attained the high standard of their diagnostic acumen by the regularity with which they attended the *post-mortem* room, and examined the pathological conditions present to account for the symptoms which they had observed during their patients' last illness. These giants were famed for their knowledge of diseases of the kidney, blood, heart, lungs, and liver. There are and have been very few giants among the physicians who have obtained their reputation by their skill in abdominal diagnosis. The reason for this is not far to seek. The physicians have not the opportunity of looking into their patients' abdomens to the same extent that the surgeons have, and it is noted with regret that so many of them do not take the opportunities offered to them by their surgical colleagues of being present to see their cases on the operating table. Far more is learnt by seeing a series of abdominal operations on patients whom you have seen and

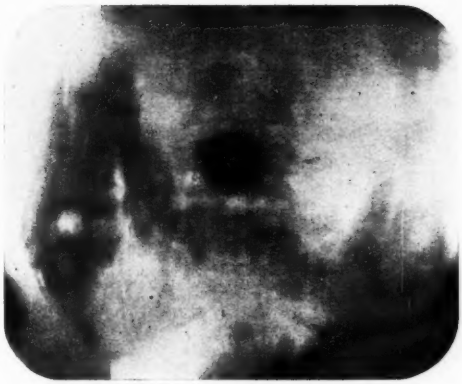


PLATE 3.

Taken 8½ hours after ingestion. Shows barium in the appendix, the ascending colon adherent to the first limb of the transverse colon, and the head of the column half-way through the transverse colon.

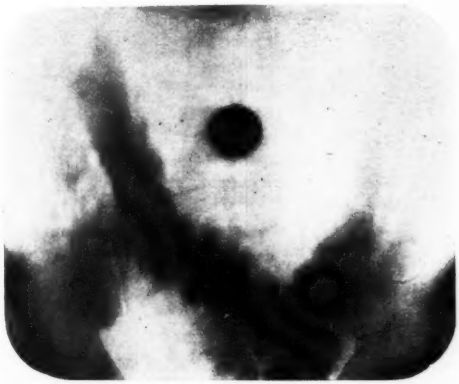


PLATE 4.

Taken 25½ hours after ingestion. Shows barium in a U-shaped appendix, a long ascending limb of the transverse colon, the commencement of which is adherent in the left side of the pelvis.

examined clinically beforehand than by attending any number of *post-mortem* examinations, for by far the greatest number of abdominal cases operated on recover, and do not reach the *post-mortem* room on account of the conditions for which the operation was performed, and secondly, those that do die have been investigated on the operating table, and there is usually no necessity for a further examination after death.

In this connection the two following quotations from C. L. Greene of St. Paul (*Medical Diagnosis*, page 1) are worth remembering :—

1. "Accurate diagnosis is prerequisite to accurate prognosis and effective treatment."

2. "Diagnosis demands a sufficiency of facts, truthfully recorded, intelligently sifted, and viewed without bias or prejudgment."

The safety and future welfare of the patient are enormously enhanced if the doctor can make a correct diagnosis of the abdominal condition which is causing the symptoms at a sufficiently early date, and is willing to call in a surgeon as soon as the diagnosis is made. Many a useful life has been lost by the practitioner waiting until the diagnosis is all too evident, and the valuable moment when a successful operation might have been performed with little or no risk has been allowed to pass.

POSTGRADUATE STUDY.

BY

J. M. FORTESCUE-BRICKDALE, M.A., M.D., M.R.C.P.,

Physician to the Bristol Royal Infirmary.

YEARS ago at Guy's Hospital it used to be the custom of the Pupils' Physical Society to ask an old Guy's man once a year to come and give an address at the opening meeting of the session. The lecturers were not, as far as I remember, usually specialists or consultants, but eminent general practitioners, and the practice was certainly a good one, and the lectures often of considerable valne, especially to senior students. On one occasion the subject chosen by the lecturer, who was a well-known and successful medical man, was, "How to remain a student through life." It may be read by anyone who cares to look up the back numbers of the *Guy's Hospital Gazette*, somewhere in the nineties. I remember at the time, as most of us were engaged in fighting the examination fiend, the subject appeared to have a touch of irony, and some "chronics" openly asserted that they knew more about it than the lecturer.

But I do not think now that any medical man, general practitioner, consultant or even the most special of specialists, would consider the condition of perpetual studentship at all easy to attain. We all tend to get into grooves and to be contented with the methods we have always used and the knowledge we seem always to have possessed; and even the exercise of teaching the unfledged student does not always entirely ensure that openness of mind and habit of scientific inquisitiveness which is so essential to real progress.

In one sense all medical men must remain students through life, for all must study their cases; but for the

General Practitioner one difficulty seems to be that he has to spend a great deal of time in studying his patients, and cannot therefore give sufficient time to the study of disease in the scientific sense. But advance in medicine, to be effective, must be made on a wide front. Isolated attacks, however brilliant and well planned, do but little to compel a general retirement on the part of the enemy. In the present state of things the opportunities for countless valuable observations are lost, because the men qualified to make them have neither the time nor the necessary apparatus and equipment. There are of course exceptions. Jenner, as we all know, was a country practitioner, and there have recently been other examples of valuable work done in the course of a very busy practice. But we have to legislate for the average man and not for the exceptional man, and that is why it seems to me that some steps should be taken to make it possible for the many men who start well qualified in their profession to continue those studies which they have begun in the wards of their hospital or the laboratories of their medical school.

Minute studies of rare or exceptional diseases may bring fame, but are they always of the same value to science and humanity as careful investigations on the common and every-day conditions which are dealt with almost exclusively by the General Practitioner? If, for instance, we knew as much about measles as we do about myxœdema, and could treat it with the same success and certainty, what an enormous difference it would make to our mortality statistics at the end of only one year.

Then, again, how much do we know of the slight and insidious beginnings of disease, of familial and hereditary tendencies, of the consequences of slight ailments? These things can only be observed by the General Practitioner, and are a work extending over many years. What opportunity has he for duly recording and analysing his

observations, even if he has time for detailed observations of any kind?

I need not perhaps labour these points, but what I wish to emphasise is that immense possibilities lie open to the General Practitioner if means can only be devised for enabling him to use them fully.

I will now pass on to outline what in my opinion are some of the ways in which organised postgraduate study may help towards enabling the General Practitioner to make use of the material and experiences which are round him for the advancement of medical science and the benefit of humanity. It seems to me that there are five conditions which, if they could be fulfilled, would go some way towards realising this ideal. Means should be forthcoming to enable the General Practitioner to—

Firstly.—Keep abreast of the general scientific advances of the time.

Secondly.—Keep in touch with the outstanding clinical and pathological observers of the city, district, or state.

Thirdly.—Command expert assistance in the way of laboratory and pathological investigations.

Fourthly.—Keep and study his systematic records.

Fifthly.—Most important and most difficult condition of all, obtain sufficient time to do all these things.

These five points may now be considered in detail, as the success of their practical realisation depends on the scope which is assigned to them, and methods by which they are put into practice.

1. To keep abreast of general medical and scientific knowledge is not easy. It is not done by merely skimming through a number of medical journals, whether English or foreign, or by the study of epitomes and abstracts. Much that is printed is far from being knowledge, and the time required for the process of sifting the valuable material from

the dross is too great for most men in general practice. It is here that courses of postgraduate instruction may be of considerable value. Hospital physicians and surgeons and pathologists must always to some extent be specialists and in a position to appraise the value of scientific communications on the subjects or branches of knowledge in which each one is specially interested. Without giving undue weight to specialism, all in such a position should be able to embody some results of critical study in lectures and demonstrations.

2. By the second condition I mean to imply that in all centres of medical education there are (or should be) men who stand out conspicuously as clinical observers and teachers. To enable these men to use their powers to the best advantage, they should be given such a position both academically and financially that they can devote the greater part of their time to organising and inspiring the teaching and researches of their colleagues, as much without as within the walls of their university and the wards of their hospital. The great gifts of accurate observation and critical estimation, the power of co-ordinating results and detecting fallacies of method, are not given to all alike, and those men who are most endowed with these faculties should be able to diffuse them over as wide a circle as possible ; to do this they must be relieved of much of the routine of practice, and brought into touch with all those who are engaged in medical studies, whether undergraduate or postgraduate.

Moreover, I would suggest that in any good scheme of postgraduate study provision should be made for professors and clinicians from other centres of learning to give occasional lectures, demonstrations or courses of instruction.

3. By expert laboratory assistance I mean something more than staining tubercle bacilli in sputum, or estimating urea in the urine. If the General Practitioner is to treat his patients scientifically and to be in a position to advance the

knowledge of diagnosis and treatment, he must be kept in personal touch with the pathologists, and by means of courses of instruction be informed of the nature of the investigations which are likely to lead to good results, and the precautions to be taken in obtaining material for them. A general knowledge of recent laboratory methods, of their applicability to given cases, and of results obtained elsewhere are essential if the clinician and the pathologist are to work together in fruitful concert.

4. So far it would seem that the three conditions hitherto outlined can be met by courses of organised instruction at a well-equipped centre. Towards realising the fourth condition, and also as a supplementary measure as regards the other three, I make the following suggestions.

The systematic keeping of records is largely a matter of training and habit, and this can, of course, best be acquired in the wards of a hospital. As applied to the General Practitioner, this may be brought about in two ways, not necessarily antagonistic, but rather complementary to each other.

The first way is by the establishment of clinical assistantships for men in general practice, to be held for a limited time and involving definite hours of attendance. Preferably, I think, this should be done in postgraduate wards and out-patient clinics, where the method of work could be specially adapted to the needs of the practitioner.

The other is by organising General Practitioners' Hospitals. These should be furnished with the staff and equipment of an ordinary general hospital, and should be provided with resident medical officers. Probably special departments would not be required, and the work would be mainly medical rather than surgical. Here the practitioner could admit his own cases, not necessarily without payment, and could observe and record his observations. The cases would, as

a rule, include the more common and less severe types of disease and injury which badly need extended and careful observation. By linking these hospitals with the central clinical institution the practitioner could secure the co-operation and advice of any member of the consultant teaching staff if he wished to do so, and by affiliation to the University facilities for pathological investigations could be provided.

5. This, as I have already stated, is by far the most important and difficult problem in the whole question of postgraduate study. The following suggestions must be considered as a partial solution, for everything depends on a careful working out of detail, and this is hardly possible in a short paper like the present. Two considerations present themselves: firstly, to the General Practitioner as much as to any other business man time is money; if he is to take time from his business and devote it to study, it is difficult to see how he can fail to be a loser financially. Of course increased efficiency may in some cases bring increased income, but not in all by any means. Secondly, how can the necessary attendance on the sick be carried on if an appreciable amount of the time of many of the doctors is taken up by other avocations?

As regards the first of these considerations, I think that the State should among its various benefactions endow postgraduate education, which must in the end benefit the whole mass of the population. A certain number of exhibitions or bursaries should be founded for medical men who desire to undertake postgraduate study; they might be awarded by the local University or by a specially constituted committee representing the University and Municipal authorities, with perhaps some elected representatives of the practitioners themselves. The actual value of the bursary need not be large, but should be enough to compensate the postgraduate

student for loss of business while engaged on courses of study, and should only be tenable during the continuance of the course.

With respect to the second consideration, it must be remembered that a certain proportion of every doctor's time is taken up by visits that need not be paid, and further that want of consideration for his time on the part of the public is not infrequent. During the war the public has probably to some extent been forced to appreciate this fact, so that now is an excellent time for seeing that the lesson is not forgotten. But apart from this, it seems possible that some system of co-operation could be devised among the medical men of a district or area whereby one or more of them could devolve his work on the others during the hours he devoted to postgraduate studies. This system when adopted on a sufficiently wide scale need not involve much financial loss ; fees earned in the doctor's absence should be credited to him entirely, and the system being mutual would be fair to all. The public soon grows accustomed to any generalised system, and in the end, of course, would benefit by the increased efficiency of the medical service.

To give effect to any system or scheme such as has been outlined in this paper a propaganda is necessary. Possibly this could be furthered by the establishment of a " Union for Postgraduate Studies," with a nominal subscription, which could discuss details from the General Practitioner's point of view, gain publicity for the idea, and enlist the co-operation of the mass of the profession, without which very little advance can be made.

THE OPERATIVE FINDINGS IN THIRTY CASES OF GUNSHOT INJURY OF NERVES, WITH REMARKS ON DIAGNOSIS, LOCALISATION, AND THE TECHNIQUE OF OPERATION.

BY

CHARLES A. MORTON, F.R.C.S.,

Professor of Surgery in the University of Bristol; Senior Surgeon to the General Hospital, the Children's Hospital, and late Surgeon to the Beaufort War Hospital; and District Consulting Surgeon for Gloucester and Somerset in the Southern Command.

IN cases of complete division of the nerve the ends may lie quite apart, and the proximal end, as is well known, often has quite a marked bulb on it. This bulb is generally adherent by scar tissue to the surrounding structures, as is also the distal end of the nerve. But in some cases of complete division the ends are united by a bridge of scar tissue. This bridge may not at all resemble the nerve in shape, it may (as in one of my cases of divided sciatic nerve) be quite a flat band, but in some cases it may not be at all easy to be sure whether the nerve is actually divided and bridged by scar tissue, or whether what looks like scar tissue is really a continuation of the nerve with scar tissue around, and the nerve thickened by sclerosis. We must not expect to find the divided ends of the nerve always separated by a gap, though we often do, and it is the nature of the intervening tissue, between what is obviously nerve, that is often a difficult matter to determine. A very marked bulb on the proximal side of what seems to be only a bridge of scar tissue

would be evidence that the nerve terminated in it, but a bulbous enlargement is often present on an injured nerve which is not completely divided, but would not then have a strand of what appeared to be scar tissue replacing the nerve below it.

It has been recommended that in order to decide if this apparent bridge of scar tissue is really a continuation of the nerve that the surgeon should try and dissect fasciculi through it, but in very dense scar tissue it may not be possible to find them.[1] It has also been stated[2] that the application of a very weak faradic current to the nerve above is a good guide as to whether there are conducting fibres through the scar tissue.

Another very important question to consider is, how to deal with marked thickenings of the nerve. Some surgeons have advised resection of the thickened and enlarged portion of the nerve with union of the ends,[3] others only if the enlarged part of the nerve is hard,[4] and others again[5] only if the conductivity of the nerve to the faradic current is lost or greatly weakened. We must remember that even if the nerve is very greatly thickened recovery may occur. Eve[6] records a case in which the musculo-spinal nerve was as thick as "the end of the little finger," but after freeing the nerve from the surrounding scar tissue recovery quickly took place. My own feeling is that it would be better not to resect unless the nerve were very hard and had lost, or almost lost, faradic conductivity, but that it should be given a further prolonged period for recovery, and then if it did not take place, after the patient had been warned of the long time which must elapse

[1] Eve, *Lancet*, 1915, ii. 1021.

[2] Trotter, *Lancet*, 1915, ii. 1025, and Rowley Bristowe, *Brit. Med. J.*, 1918, i. 6.

[3] Sherren, *Injuries of Nerves*, 1908, p. 78.

[4] McMurray, *Brit. Med. J.*, 1918, i. 380.

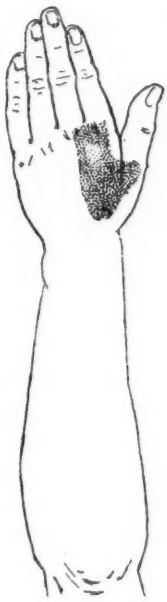
[5] Stiles, *Brit. Med. J.*, 1918, i. 380.

[6] *Lancet*, 1915, ii. 1021.

after suture before recovery took place, I think the enlarged portion of the nerve should be excised.

In cases of complete division associated with fracture we may find one or both ends of the nerve lost in the united fracture, and have to chisel them out ; or if the nerve is not completely divided, it may be only bound to the fracture by dense scar tissue, and thus compressed, but it may have to be chiselled out of the callus in which we may find it embedded.

In incomplete lesions (cases in which the nerve is either not completely divided or not divided at all) the most frequent condition found on operation is binding down of the nerve in scar tissue, and in some cases it is flattened from



CASE II. — Epicritic sense impaired and protopathic lost in shaded area.

CASE II.—The thickened part of the nerve, containing the two fragments of metal.

pressure. But either combined with the binding down by scar tissue, or without, there may be fusiform, or less often nodular enlargement of the nerve, and this enlargement is generally firm, but may be soft, and sometimes we find that this enlargement, which usually affects one end of the nerve, contains minute fragments of metal, or stains of metal, showing that they have passed through the nerve. Sometimes the nerve feels as if one or more of its fasciculi had been replaced by a wire. Partial laceration is now and again found—a certain number of fasciculi only are divided, and in one of my cases the lacerating fragment of shell remained embedded in the nerve (Case 15).

CASE 1.—To illustrate the presence of a minute fragment of metal in the median nerve.

Some of my cases illustrate what is well known, and is of great practical importance, that in incomplete lesions all the signs of complete division may be present. The lesions usually found in these cases are either pressure of scar tissue or a localised thickening of the nerve itself. However it is unwise to make a diagnosis that the division is complete entirely by the signs which are present, we should wait and see if improvement takes place. From the statements in some books we might conclude that if the "reaction of degeneration" were present, that the lesion must be complete. But I have several times had reports from skilled medical electricians that paralysed muscles had this reaction, and yet those muscles have recovered. On the other hand, if there is faradic irritability, the prognosis as to recovery of the muscle certainly seems good.

But we may also make the opposite mistake and conclude that a complete lesion is incomplete, and go on with electrical treatment and massage for an unnecessarily long time,

because we consider we have evidence of a certain amount of function of the nerve. In one of my cases there was an absence of anæsthesia on the dorsum of the foot (Case 19),

CASE 15. — Area of dark shading=loss of both epicritic and protopathic sense. Area of light shading=loss of protopathic sense only.

CASE 15.—Incomplete division of external popliteal nerve by fragment of shell embedded in it.

1. Fragment of metal embedded in nerve.
2. Nerve after removal of fragment of metal, showing laceration of the greater part of the nerve. (*a*) The uninjured strand.

CASE 9. — Gap in median nerve where the ulnar nerve was adherent to it.

which made me think a lesion of the external popliteal was incomplete when the nerve had been completely divided. The mistake was inevitable in this case, for there certainly should have been loss of sensation on the dorsum of the foot in complete division of the nerve. But in injury of this

nerve we may be led into error by statements in the ordinary text-books of anatomy. It is there stated that the musculo-cutaneous nerve and the anterior tibial nerve together supply the dorsal aspect of all the toes; but really, as pointed out by Sherren,[1] the dorsal aspect of all the toes but the great toe is supplied by the plantar nerves, and therefore we must not expect anæsthesia there in even complete lesions of the external popliteal nerves.

In one of my cases of complete division of the ulnar nerve (Case 27) in the middle of the forearm, there was retention of epicritic (but not protopathic) sense on the ulnar side of the ring finger, and on the ulnar side of the palm. The latter may have been due to a very high origin of the palmar cutaneous branch, but the retention of epicritic sense on the ulnar side of the ring finger suggested an incomplete lesion.

In my case of excision of some inches of the posterior tibial nerve (Case 2) there should have been loss of epicritic and protopathic sense on the plantar aspect of the toes (and the dorsal as well), but though they were absent on the sole, yet on the plantar aspect of the great toe he could not only feel a very light touch, but locate it correctly, and was able to feel a prick as distinct from a touch; and on the plantar aspect of the other toes he could feel a light touch, but could not locate it, and could not distinguish a prick from a touch. This retention of sensation might have been very misleading in the diagnosis between a complete and an incomplete lesion.

It has been stated by Sherren[2] that division of the musculo-spiral nerve below the origin of its external cutaneous branches does not cause anæsthesia in the so-called "radial supply," as would be expected from statements in the text-books, but that the "radial supply" depends on the long external cutaneous branch of the musculo-spiral, and

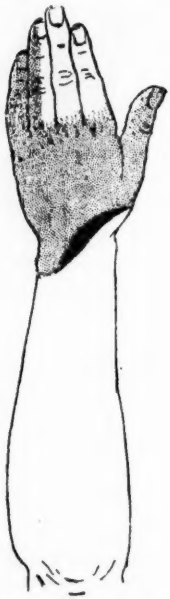
[1] *Injuries of Nerves*, 1918. [2] *Injuries of Nerves*, p. 237.

the posterior branch of the external cutaneous which join the radial. I found this to be so in one of my cases. The musculo-spiral nerve was involved in a fracture at the middle of the humerus (Case 24). But in some other cases there have been areas of both epicritic and protopathic loss in some part of the "radial supply" (see chart of Case 12), and in these cases the external cutaneous branches of the musculo-spiral and the posterior branch of the external cutaneous were not injured. In one case a fragment of metal was actually lodged within the nerve, three inches above the external condyle and an area of anæsthesia was produced as shown in the chart (see chart of Case 11), and pressure on a foreign body in the nerve at this level caused pain in the "radial supply" of the thumb and index finger.

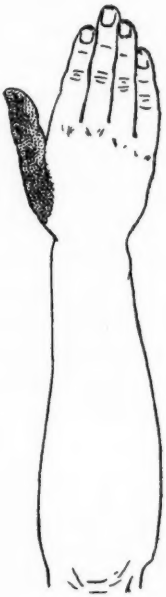
CASE 12.—Loss of epicritic sense in light shading and pin-prick in dark.

Sherren also says that the upper part of the radial nerve may be excised for grafting without producing any sensory loss. I removed two and a half inches to graft into another nerve. The sensory loss is shown in chart of Case 27, and is almost exactly the radial supply of the anatomy text-books (the loss of sensation in the ulnar supply was due, of course, to the original lesion). In Case 29 there had been a fracture of the upper end of the radius, and the radial nerve was probably injured also. There was a little epicritic and protopathic loss on the dorsal aspect of the thumb (as shown in chart), but there was also pain in the same nerve distribution,

and this was clearly due to an injury of a branch of the external cutaneous nerve, for when pressure was made on a scar over it it caused the pain, and resection of the branch with the scar tissue in which it was involved cured it. But



CASE 27. — The light shading is the area of loss of both epicritic and protopathic sense, and the smal area of dark shading the loss of protopathic sense beyond the area of loss of epicritic sense.



CASE 29.

that the lesion of the branch was not the cause of the anæsthesia on the back of the thumb was shown by the fact that excision of the branch produced another area of anæsthesia near the wrist and the centre of the hand. There was a scar on the posterior aspect of the forearm, which might have involved the long external cutaneous branch of the

musculo-spiral nerve, but the great probability is that the radial nerve was damaged at the seat of fracture of the radius. The case is not, of course, so conclusive as the one of excision of the upper end of the radial nerve, but is fairly good evidence.

Not only may we be misled as to the diagnosis between a complete and an incomplete lesion by the absence of anæsthesia where we might expect it, we may also be misled by the retention of power to perform some movement which we consider should be lost in complete division of the nerve. I have twice been misled by this, in complete division of the ulnar nerve, with persistent ability to adduct the thumb—not the false adduction which Sherren so clearly describes[1] due to action of either the long flexor or the extensors, but the true adduction he describes, and such movement as you can produce by electrical stimulation of the adductor. In one case I was quite misled by the return of this action of adduction, and demonstrated to a surgery class that it was true and not false adduction, and that the lesion of the ulnar nerve must therefore be incomplete. Yet the ulnar nerve was wholly divided (Case 27). I have found the same condition in another case of divided ulnar nerve (Case 20) since my experience in Case 27, but taught by experience in that case I was not led into an error in diagnosis. I believe the adduction is carried out by the extensor longus pollicis (extensor secundi internodii pollicis). Another mistake which may be made in the diagnosis between a complete and an incomplete lesion of the ulnar nerve is that the flexor carpi ulnaris is producing ulnar flexure of the wrist, when it is paralysed. I have seen this action in cases of complete division of the ulnar nerve. Mr. Sherren has called attention to this,[2] and he considers the action is performed by the palmaris longus. Where I have found ulnar flexion in

[1] *Injuries of Nerves*, p. 248. [2] *Injuries of Nerves*, p. 247.

complete division of the ulnar nerve it has seemed to me to be due to a combined action of the flexor carpi radialis and the extensor carpi ulnaris. A knowledge of the substitution of the action of a muscle or group of muscles for a paralysed muscle or group of muscles is of great importance in the diagnosis of nerve lesions, and it may be well to call attention to two more instances of it. Sherren[1] has pointed out that when the normal flexions of the elbow are paralysed flexion may be performed by the supinator longus (brachio-radialis) and the extensors of the wrist, when the forearm is fully pronated. And Souttar and Twining[2] have pointed out that in complete lesions of the median and ulnar nerve flexion of the wrist can still be performed by the "short extensors of the thumb."

But when we have made the diagnosis of an incomplete lesion, we must not therefore conclude that recovery will be only a matter of time. In some of these incomplete lesions some of the fasciculi of the nerve are completely divided, and only operation for their reunion will lead to recovery. Therefore if there is no return of power or sensation in some of the affected areas of supply after a prolonged period of suitable electrical treatment and massage, operation must be undertaken. Case 12 is a good illustration of the need for this.

In two of my cases (Cases 1 and 9) the lesions suggest the locality of fibres within the median nerve supplying certain muscles and areas of skin. In Case 9, in which there was division of the inner part of the median nerve in the axilla, there was a loss of epicritic and protopathic sense in the cleft between the ring finger and middle finger, and on the radial side of the middle finger only, with paralysis of the abductor pollicis only. In Case 1 there was a foreign body in the

[1] *Injuries of Nerves*, pp. 197, 231.

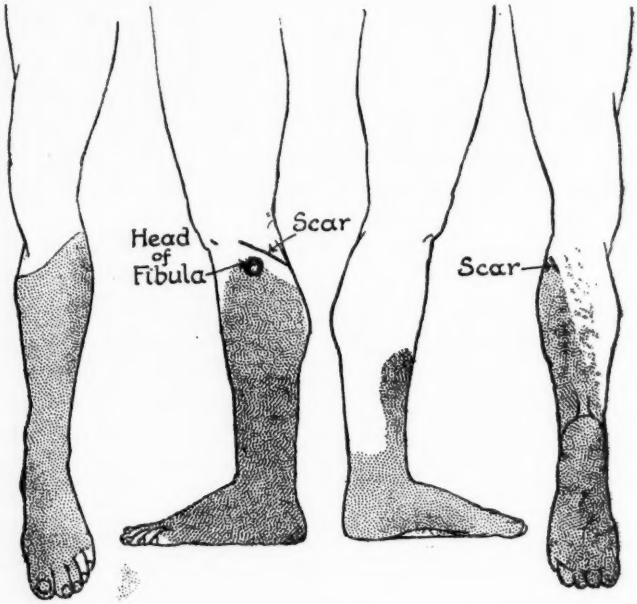
[2] *Brit. J. of Surg.*, October, 1918, p. 282.

outer half of the median nerve just above the elbow, and there was paralysis of the flexor longus pollicis only, and the epicritic sense was present, but feeble and tingling in the median supply in the fingers and thumb, and protopathic sense was not lost there. These two cases taken together seem to suggest that the fibres for the flexor longus pollicis pass down the outer and those for the intrinsic muscles of the hand the inner side of the nerve, and that sensation is more affected by a lesion of the inner than the outer ; but we must remember that the lesions were at different levels, the one with the greater sensory change was in the axilla, and the one with the very partial sensory change at the level of the elbow.

In connection with the diagnosis of the nature of the lesion of an injured nerve, we have to recognise the disconcerting fact that with extensive paralysis and anæsthesia the nerve may on exploration be found to naked-eye inspection and on palpation normal. This was so in a case in which the musculo-spiral nerve was examined, and other surgeons have had the same experience with this nerve.[1] In another of my cases of gross lesion of the musculo-spiral nerve (Case 12) there were signs of a partial lesion of the median and ulnar nerves, which had persisted for several months and up to the time of operation, and yet these nerves appeared perfectly normal when exposed. The signs present were patchy epicritic and protopathic loss on the median and ulnar supply of the fingers, and very feeble action of the flexors of the wrist and fingers, and of the intrinsic muscles of the hand. I had the same experience in a case of divided external popliteal nerve (see chart Case 21). In this case not only were the calf muscles very feeble, but there was epicritic and protopathic loss in the distribution of the internal popliteal nerve, suggesting a partialr lesion of it as well as the

[1] Michell Clarke and Short, *Bristol M.-Chir. J.*, July, 1917.

complete lesion of the external popliteal, but when the external nerve was sutured four months after the injury the internal one was found to be uninjured. The lesion of the internal popliteal nerve must have been a condition of nerve



CASE 21.—Epicritic and protopathic loss in shaded area. Dotted area= uncertain epicritic loss and no protopathic loss.

concussion only. We must not, therefore, conclude that in all cases a marked feebleness of the opposing group of muscles to the group paralysed, even when combined with anæsthesia, indicates a complex gross lesion of the nerves. I have included in this series of cases one (Case 3) which was not a nerve operation. It was an operation for secondary hemorrhage in the popliteal space, but I was able to find out the condition of the internal popliteal nerve. There was

both epicritic and protopathic loss on the plantar aspect of all the toes, and the dorsal aspect of the outer three, and patchy loss on the sole. But the nerve was not even exposed in the wound. The sensation quickly returned.

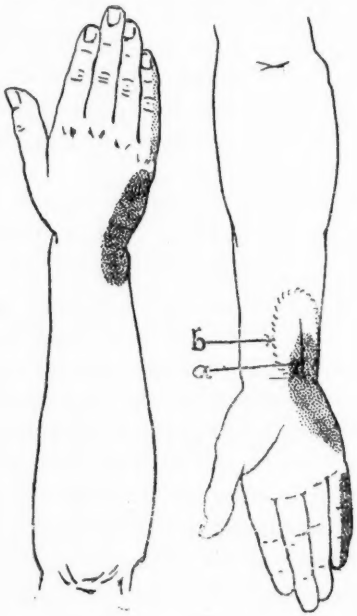
In cases in which there is more than one scar in the course of a nerve the function of which is impaired it may be difficult to decide at which level the nerve has been injured. The involvement or escape of branches to certain muscles may enable us to decide, but will not always do so. We may be misled in such cases by pressure on the scar causing tingling in the distribution of the nerve. In one of my cases (Case 5) there were two scars at the back of the thigh in the course of the internal popliteal nerve, and pressure on the higher caused pain in the sole of the foot, and was therefore supposed to be over the lesion in the nerve, but the lesion of the nerve was found several inches lower, under another scar.

I had five cases in which gunshot wounds of nerves caused great pain in their distribution. Two cases recovered without operation—lesion of the posterior tibial and ulnar nerves, and three cases required operation (Cases 2, 4 and 5). In these three cases the nerve was found to be bound down in dense scar tissue in Case 2, apparently injured by a small fragment of metal, and thickened in Case 5, and thickened and adherent to scar tissue in Case 4. These were all lesions which are frequently present without pain, and there seems to be no evidence to show why in certain cases the severe pain is caused. In three of my cases in which foreign bodies were actually present in the nerves there was not any severe pain—the patients made no complaint of pain—and yet one would expect such a condition would be the most frequent cause of such pain. How much less likely then is the pressure of a foreign body lying merely against the nerve to cause some pain. There was no skiagraphic evidence of any

foreign body near the nerve in the two cases I did not operate on.

Limitation of space prevents my writing of the treatment of these distressing cases at any length now, but I should like to say that I have found injection of alcohol in the nerve completely relieve the pain in two cases in which I practised it, and the functional loss which results is said[1] to be only temporary, but may last many months.

I have had one case of very intractable hyperæsthesia in a small area of the supply of the ulnar nerve, which was injured just above the wrist (see chart Case 31). The chart



CASE 31 (August, 1918).—(*a*) is the scar; (*b*) the area of subcutaneous tissue removed. Shaded area on hand represents area of hyperæsthesia. Shaded area on little finger represents the persistent loss of pin-prick.

[1] Sicard, *Lancet*, 1918, i. 213.

shows the area of hyperæsthesia, which was so great that the patient could not bear the slightest touch on it. I explored the nerve at the seat of injury, and found the common lesion of thickening and binding down in scar tissue. The freeing of the nerve led to recovery of power in the paralysed intrinsic muscles of the hand, but had no effect on the hyperæsthesia. This was in the distribution of the palmar cutaneous branch, and the dorsal branch, but there was no evidence of injury to the nerve above the level at which they arise. I operated again, and as I could not on a second attempt identify the palmar cutaneous branch, I dissected out an area of subcutaneous tissue which must have included it, but again I failed to relieve the hyperæsthesia.

I do not propose to write at any length on the technique of the operation for dealing with injured nerves, but there are a few points I should like to allude to. One is the statement that the ulnar nerve can be elongated by bringing it to the front of the internal condyle. I was not myself able to see how elongation could be brought about in this way, and I therefore experimented on the dead body. I found that it did not make any difference to the length of the nerve, whether it ran behind or in front of the condyle, in either the flexed or extended positions of the forearm, but that the mere freeing of the nerve from its connective tissue bed behind the condyle allowed of considerable elongation.

I have already published [1] a case of suture of a divided fasciculus of the musculo-spiral nerve, and I would again call attention to the desirability of treating all partial divisions of a nerve in this way.

With regard to the debated questions as to whether the sutures should pass through the nerve, or only through its sheath, whether it is better to wrap the nerve in Cargile membrane or fat or fascia, and as to the value of nerve grafting

[1] *Lancet*, 1918, i. 373.

or attachment to other nerves, only observation of cases over a very prolonged period of time can decide, and it is so very difficult to do this in the case of military patients whose homes are elsewhere. With regard to the practice of wrapping the nerve in Cargile membrane, I can say that I have never had any trouble from it, as I have had in operation on tendons, from a late discharge of the membrane, and I have used it in all my nerve cases. In one case (Case 4) in which I had to operate again a month after the first operation I found it still wrapped around the nerve, though very fragile. It was chromicised.

It is well to recognise that a gap of three inches in the sciatic nerve (Case 23) can be quite well closed without tension, by nerve stretching, and flexion of the leg on the thigh.

I suppose many of us are rather sceptical as to very rapid return of sensation after operation on a nerve, but I have had one undoubted case (Case 6) of return of epicritic sense in the median supply within twenty-four hours after freeing the nerve from the dense scar tissue in which it was embedded.

INCOMPLETE INJURIES (NOT FRACTURES).

NAME, ETC. HOSPITAL.	NERVE.	SIGNS AND SYMPTOMS.	FINDING AT OPERATION.
1 J. M. G., æt. 35. Nov., 1917. B.W.H.*	Median.	Wounded two months before admission, and had small scar of punctured wound in course of median nerve two inches above elbow, and skiagram showed a minute foreign body there. Epicritic sense in median supply on fingers and thumb not absent, but dull and tingling. No protopathic loss, only loss of power in flexor long pollicis. Pressure on foreign body caused tingling in centre of flexor aspect of forearm, and in index and middle fingers.	A minute fragment of shell was found in the outer half of the nerve, which was enlarged so as to be spindle-shaped at seat of injury. It lay quite within the nerve, and had to be removed by a longitudinal incision in the nerve. See diagram.
2 T. H. C., æt. 19. B.W.H. Nov., 1917.	Posterior tibial.	Very severe pain in distribution of nerve. Large granulating wound, involving the deep structures just below middle of calf of six weeks' duration. Very severe pain in sole of foot. No epicritic loss, and pin-prick causes considerable pain.	Posterior tibial nerve was found flattened and bound down by dense scar tissue to back of tibia. It was freed and wrapped in cargile membrane. The immediate result of this was that the pain was very much relieved, and was almost confined to the distribution of the external plantar, and the hyperæsthesia disappeared. The relief continued for a fortnight; then as the pain began to get so severe again that frequent hypodermic injections of morphia were required, on December 15th I operated again, and found the nerve again involved in dense scar tissue. I excised 5¼ in. The nerve where it had been bound down by the scar tissue was not enlarged, but on one aspect (probably the one corresponding to the course of the fibres of the external plantar nerve) was very indurated and contained fewer nerve bundles than above and below. The operation quite cured the pain.

Name, etc. Hospital.	Nerve.	Signs and Symptoms.	Finding at Operation.
3 McC. B.W.H., Sept., 1918.	Internal popliteal nerve.	I have included this case though the operation was not for the nerve lesion as it is very instructive, as showing how little damage may be done to a nerve, and yet there may be anæsthesia. There was both epicritic and protopathic loss on plantar aspect of all the toes, and dorsal aspect of the outer three, and patchy loss on sole.	The popliteal space had to be opened up for secondary hemorrhage, but the internal popliteal nerve was not exposed in the wound, or if exposed at all only a very minute area of it. But I think it was not exposed. Of course it is just possible that a very minute piece of metal may have penetrated the nerve, but the anæsthesia completely disappeared in a month, so that this could hardly have occurred.
4 W. H., æt. 24. B.W.H., April, 1918.	Internal popliteal	Severe pain in distribution of nerve. Severe pain in sole, heel, and plantar aspect of toes. Came on a few minutes after wound in region of internal popliteal nerve. There was loss of epicritic and protopathic sense in front part of sole and protopathic on plantar aspect of all toes but great toe. Skiagram showed several minute fragments of metal in region of nerve. The sole was hyperæsthetic.	There was a fusiform enlargement on the nerve, and a few black spots on it as if minute fragments of metal might be embedded in it, but a longitudinal incision in the nerve did not discover any. There was some scar tissue on it, but it was not compressed by scar tissue. The pain was only relieved for a few days. The area of anæsthesia remained the same, but the area of hyperæsthesia shifted to the outer part of the foot. The pain was chiefly in the heel. It became so severe again he had to have frequent hypodermic injections of morphia. I then injected the nerve with alcohol with success. The same thickening of the nerve was then found as at the first operation, one month later.
5 S., B.W.H., April, 1918.	Internal popliteal.	Severe pain in distribution of nerve. Track of gunshot wound through popliteal space. Immediately he received wound he felt tingling in foot, and very soon after pain there. A month later he was admitted suffering from severe pain starting in heel and passing forward over sole, which required hypodermic injection of morphia. There was loss of epicritic and protopathic sense on heel, but no hyperæsthesia.	Operation five weeks after injury. Nerve was found much thickened for one inch and very adherent to dense scar tissue on its anterior aspect, where a minute boss protruded from it. It was injected with alcohol with complete relief of the pain.

6 F. C. B., æt. 25. G.H.† June, 1918.	**Median.**	Wounded ten months before. Scar in portion of median nerve at middle of forearm. Epicritic sense either lost or impaired in median supply on fingers and thumb, and protopathic loss in same area except thumb and radial side of ring finger. There was jerky feeble flexion of last joint of thumb and index finger, but flexion was fairly good in all other joints of the fingers. Abductor pollicis was paralysed. There seemed to be a partial lesion of the median, probably below anterior interosseous branch, which might be partly injured also, but the feeble action of some of the flexors might be accounted for by direct muscle injury.	One inch of median nerve was involved by such a dense scar adherent to interosseous membrane and the bones, that it felt like a lump of bone. The nerve was dissected out of this, and was not itself thickened. The feeble flexors were also involved in scar, and the lesion was below the region of the anterior interosseous nerve.

* Beaufort War Hospital.
† General Hospital.

INCOMPLETE LESIONS.

7 F. K., æt. 32. B.W.H., Oct., 1916.	Musculo-spiral.	Signs of complete division of nerve. Scar in upper third of arm. Area of anæsthesia on back of forearm, and part of "radial supply" on hand, on dorsal aspect of thumb, but only over dorsal aspect of metatarsal bone of index finger.	Operation three months after injury. Nerve incorporated in aneurysmal sac of axillary artery and flattened.
8 A. C., æt. 21. B.W.H., Dec., 1917.	Ulnar nerve.	Complete paralysis of ulnar nerve from wound in upper part of arm. No faradic and very feeble galvanic reaction. In many of the muscles there was polar reversal. No improvement in nine months.	Operation nine months after injury. One inch of nerve was involved in dense scar tissue. When freed it seemed to have been divided and united by scar tissue. This was excised and the ends united, but on examination after resection I could trace a few nerve fibres running through it, though it was almost wholly fibrous tissue stained by metal.

Name, etc. Hospital.	Nerve.	Signs and Symptoms.	Finding at Operation.
9 G. D., æt. 21. B.W.H., Mar., 1917.	Median.	Anæsthesia of cleft between middle and ring finger and on other side of end of middle finger with paralysis of abductor pollicis. Pressure on the nerve in the arm caused tingling in median supply on finger.	At operation I found destruction of the inner part of the median nerve and adhesion of end of ulnar nerve to it. See diagram.
10 H. G. B., æt. 30. B.W.H., April, 1917.	Recurrent laryngeal nerve.	Struck in neck by fragment of shell on April 6th. Immediate loss of voice. Much hemorrhage from wound. When admitted to B.W. Hospital at end of April voice was hardly more than a whisper. Laryngeal examination showed only very imperfect action of left cord. There was a small, dry wound over anterior border of left sterno-mastoid about middle of the muscle, with induration of the underlying tissue. A skiagram showed a fragment of shell about $\frac{1}{4}$ inch in diameter lying just to the left of middle line, and about one inch above the top of the sternum.	It was impossible to say to what extent the recurrent nerve was injured, but the voice was improving by May 23rd, and by then the wound had quite healed. I thought the presence of the foreign body might tend to retard or prevent recovery, and on May 23rd I removed it. It lay on the left edge of the œsophagus, fixed to the spine, and close to the recurrent laryngeal nerve, but did not actually press on it. The recurrent nerve was fully exposed up to the point where it runs under the inferior constrictor of the pharynx, and was quite normal. Although the nerve was not itself pressed on by the scar tissue, all the parts around were much bound down by it, and their release may have had some effect on the nerve. After the operation there was an immediate return of tone in his voice. His larynx was examined by Major Watson Williams on June 23rd, when his voice had greatly improved. He thought there had been complete paralysis of the left cord, and that the adductor was recovering The patient was then suffering from some breathlessness on exertion, which Major Watson Williams considered to be due to abductor paralysis.

11 T. W., æt. 20. B.W.H., July, 1917.	Musculo-spiral.	Complete paralysis of long extensors of fingers and extensors of thumb, but feeble action of extension of wrist, probably because lesion is below branch to extensor carpi radialis long. The action of the wrist extensors became quite strong, but there was no return of power in extensors of fingers or thumb. Sensation lost in area of "radial supply" (see chart). This did not return. The nerve was injured at outer border of triceps, three inches above external condyle, and was here thickened, and pressure on it caused tingling in "radial supply." Two minute fragments of metal were seen in a skiagram to lie near the nerve, but it was not evident that they lay within it. The paralysed muscles did not react to faradism, but they did feebly to galvanism.	Operation six months after injury showed a spindle-shaped enlargement of the nerve, one inch long, and very firm, containing the two fragments of metal. They were quite within the sheath of the nerve (see diagram). The enlarged portion of the nerve was firmly bound down by scar tissue. It was possible to remove the fragments of metal (which were quite thin) without damage to the nerve by a minute longitudinal incision.
12 B., æt. 19. B.W.H., Sept., 1917.	Musculo-spiral.	Injury at level of one inch below anterior axillary fold. Complete paralysis of extensors of wrist and fingers and thumb, and incomplete of triceps. But flexor muscles of hand and fingers and intrinsic muscles of hand very feeble. Patchy epicritic and protopathic loss on palmar aspect of hand and fingers, so that median and ulnar nerves must be slightly damaged. Area of anæsthesia on dorsum as shown in chart. The explanation of the loss of epicritic sense over the whole dorsum except the ulnar supply is due to partial lesion of median nerve. The electrical report was that all the muscles supplied by musculo-spiral nerve below the triceps show the R.D.	Operation four months after injury, as there was no improvement in muscles supplied by musculo-spiral nerve. Division of an anterior fasciculus of the nerve was found, and the whole nerve was bound down by dense scar tissue. The condition found at operation and the union of the fasciculus is described in the *Lancet*, 1918, i. 373. The median and ulnar nerves were quite normal, and were not at all bound down by scar tissue.

INCOMPLETE INJURIES.

Name, etc. Hospital.	Nerve.	Signs and Symptoms.	Finding at Operation.
13 W. H., æt. 22. B.W.H., May, 1917.	Ulnar musculo-spiral and internal cutaneous.	Healed track of foreign body through axilla. At first complete paralysis of all muscles supplied by musculo-spiral and ulnar nerves. Six months later there was recovery of power in triceps, and some return of power in extensors of wrist and thumb, but the paralysis of the ulnar muscles remained complete. There was both epicritic and protopathic loss in the ulnar supply. There was also a strip of epicritic loss on the inside of the forearm, chiefly on its posterior aspect, extending half-way from wrist to elbow. There was at first no faradic irritability in any of the paralysed muscles, and a very slight irritability to the constant current, and almost equal action with either pole. There was no sign of any definite lesion of the median nerve.	Operation six months after injury. The ulnar, musculo-spiral, internal cutaneous and median, were all somewhat involved in scar tissue, but the ulnar was bound down by dense scar tissue, and contained two small nodular enlargements. The musculo-spiral was the one most involved in scar tissue after the ulnar.
14 J. C., æt. 35. B.W.H., May, 1917.	Musculo-spiral.	Scar from gunshot wound in axilla. Complete paralysis of extensors of fingers and thumb and wrist, and partial of triceps. No faradic reaction in extensors of wrist or finger, but feeble in triceps. Only very feeble reaction to constant current in extensors below triceps. No certain epicritic loss, but protopathic over dorsum of thumb and second metacarpal bone. No recovery four months after operation.	Operation four months after injury. Musculo-spiral nerve exposed over whole area in which it could have been wounded, *i.e.* both in axilla and at back of arm, and the only abnormal condition found was that the nerve felt broader than usual just as it passed to the back of the arm, and it also felt as if there were a wire running through it, as if some fasciculus had become densely sclerosed. But there was no scar tissue immediately around it, but a good deal in the surrounding parts.

15 J. H. C., æt. 35. B.W.H., Nov., 1918.	External popliteal.	Several small fragments of shell penetrated upper and outer part of leg, and one seen in skiagram to be in position of external popliteal nerve, where it passed by head of tibia. Paralysis of extensor long digit, extensor long hallucis, and peronei, but good power in tibialis anticus, with area of anæsthesia shown in chart. Diagnosis of partial lesion of external popliteal nerve leaving fasciculi to tibialis anticus uninjured.	Operation two and a half months after injury. Fragment of metal one centimetre by half a centimetre embedded in external popliteal nerve, having divided two-thirds of its fibres. The divided portion of nerve was sutured. The fibres which had not been divided were the anterior fibres, *i.e.* the deep fibres as the nerve lay exposed in the wound. See Fig.
		COMPLETE LESIONS.	
16 G. M., æt. 20. B.W.H., Dec., 1915.	Sciatic.	Divided by passage of rifle bullet across middle of thigh three months before operation. The typical paralysis and anæsthesia were present. There was no faradic action and very feeble galvanic action in the paralysed muscles, and an equal response with either pole.	Both ends of the nerve were involved in a dense mass of scar tissue, and separated by a strand of half inch of scar tissue, in which no nerve fibres could be discovered on careful examination after resection.
17 G. D., æt. 21. Mar., 1917.	Ulnar and internal cutaneous.	Scar of wound in axilla. Complete loss of function in ulnar, with loss of faradic and very feeble galvanic reaction, with also strip of anæsthesia along inner aspect of forearm. There were also signs of an incomplete lesion of the median, and the combination suggested a lesion of the inner cord of the brachial plexus, but were not quite the same. Pressure on the ulnar nerve in the arm caused tingling over the dorsal surface of the metacarpo-phalangeal joints of ring and little fingers.	At operation complete division of the ulnar and internal cutaneous nerves was found.
18 L. B.W.H., Aug., 1917.	External popliteal nerve.	Complete paralysis of muscles supplied, and usual sensory loss. No faradic reaction and sluggish reaction to galvanism. K.C.C.=A.C.C.	At operation complete division of the nerve was found, with bulb on upper end, and both ends involved in scar tissue.

Name, etc. Hospital.	Nerve.	Signs and Symptoms.	Finding at Operation.
19 H. H., æt. 23. B.W.H., Feb., 1918.	External popliteal nerve.	Paralysis of dorsiflexors of ankle, and extensor of toes and peronei, but on repeated examination no epicritic or protopathic loss could be discovered on dorsum of foot, and I therefore concluded it must be only a partial lesion. The paralysed muscles did not react to faradism, and only feebly to galvanism.	The ends of the external popliteal nerve, just above the head of the fibula, were separated by one inch of flat scar tissue containing no nerve fibres. The operation was seven months after the injury.
20 J. W., æt. 30. B.W.H., June, 1918.	Ulnar.	Scar over ulnar nerve just where it passes through the heads of the flexor carpi ulnaris. Typical signs of lesion of ulnar nerve just below elbow, except that the power of adduction of thumb and ulnar flexion of wrist were retained.	Nerve found completely divided. The upper end had a large bulb on it, the lower was merged in the neighbouring muscle.
21 W. D., æt. 36. B.W.H., July, 1918.	External popliteal.	Scar of wound just above head of fibula, on posterior aspect. Complete paralysis of muscles supplied by the external popliteal nerve, and epicritic and protopathic loss in its supply. But both epicritic and protopathic sense were also less in area of internal popliteal supply, though nothing abnormal was discovered in the nerve at the operation. The calf muscles acted feebly. See chart.	Operation four months after injury. Nerve completely divided. The upper end of the nerve terminated in a bulb, the lower was not enlarged, and adherent in scar tissue just behind head of fibula.
22 F. C. B.W.H., Sept., 1918.	Median and ulnar.	Both nerves divided in large open wound just above the wrist, in April, 1918, with loss of power in intrinsic muscle of hand, usual ulnar and median anæsthesia.	Operation six months after injury. The ends of both nerves were involved in scar tissue. Neither nerve was distinctly bulbous.
23 S. H., æt. 25. B.W.H., Mar., 1918.	Sciatic.	Scars of small gunshot wounds at back of thigh, Typical paralysis below branches to hamstrings, with no reaction to faradism but feeble to galvanism, with equal effect with either pole. Usual area of anæsthesia.	At operation the ends were found separated, and with a bulb on the upper.

INJURIES OF NERVES ASSOCIATED WITH FRACTURE (COMPLETE LESIONS).

24 A. K., æt. 19. G.H., July, 1915.	Musculo-spiral.	Fracture of middle of humerus. Complete paralysis of muscles supplied by nerve, but no sensory lesion in so-called "radial area."	Operation three months after injury. Complete division. Proximal end ran into united fracture and had to be chiselled out. Distal end adherent by dense scar tissue to bone at a lower level.
25 T. R., æt. 35. B.W.H., Jan., 1916.	Ulnar.	Fracture of lower end of humerus, with complete paralysis and anæsthesia in ulnar supply. There was no faradic reaction, and very feeble galvanic, and the effect of the two poles was equal.	At operation, two and a half months after the injury, the nerve was found densely adherent to the humerus at seat of fracture, and a small fragment of bone had to be removed to free it. The ends were united by a narrow bridge of fibrous tissue only. Both ends of the nerve were considerably thickened, but there was no bulb.
26 P. P., æt. 39. G.H., April, 1917.	Musculo-spiral.	Fracture of lower end of humerus, followed by necrosis, for which sequestrotomy had to be performed, so that operation could not be undertaken for two years after injury. There was complete paralysis of all muscles supplied by nerve below seat of lesion.	Nerve was found completely divided. and both ends involved in scar tissue, at the site of the old fracture. There was a marked bulb on the proximal end.
27 E. B., B.W.H., May, 1917.	Ulnar.	Fracture middle of ulnar. The signs suggested an incomplete lesion as the anæsthesia was not complete, and the adductor of thumb was active.	Operation one year after injury. Complete division was found, with a marked bulb on proximal end. The ends were bound down in scar tissue.
28 A. V. C., æt. 30. B.W.H., Nov., 1918.	Median.	Wounded May 4th, 1918, just above wrist. Typical anæsthesia of division of median nerve here, and complete loss of power, with marked wasting in abductor pollicis.	November, 1918. Median found completely divided and both ends bulbous, but the distal end rather more than the proximal. The ends were united by a thin strand of tissue about one inch in length. The nerve had been divided just before passing under the annular ligament, but only one tendon was divided.

INJURIES OF NERVES ASSOCIATED WITH FRACTURES (INCOMPLETE LESIONS).

NAME, ETC. HOSPITAL.	NERVE.	SIGNS AND SYMPTOMS.	FINDING AT OPERATION.
29 M. H., æt. 44. B.W.H., Nov., 1915.	Radial and external cutaneous.	United fracture of radius, near lower end. Epicritic and protopathic loss on dorsum of thumb, and pain there. Pressure on scar in course of external cutaneous nerve in forearm also caused pain in same area.	The pain was cured by excision of branch of external cutaneous nerve which was involved in the scar, together with the scar.
30 W. M., æt. 27. B.W.H., Oct., 1916.	Musculo-spiral.	Fracture of upper end of humerus. Complete paralysis of extensors of wrist, thunb, and long extensors of fingers. No return of power in a year.	Nerve then exposed at seat of injury and no definite lesion found. Power was gradually returning in paralysed muscles during the following year.
31 B., æt. 24. B.W.H., Feb., 1918.	Ulnar.	Fracture of lower end of ulnar in July, 1917. Scar just above wrist. In October, 1917, it was noted that there was epicritic and pin-prick loss in ulnar supply on hand and in little finger, and in November an area of marked hyperæsthesia in ulnar supply on hand and wrist was found. In February, 1918, the hyperæsthesia persisted, but there was no longer epicritic loss in little finger, but pin-prick loss continued there. The intrinsic muscles of the little finger were paralysed, but he could adduct thumb. Electrical treatment failed to relieve the hyperæsthesia.	Operation nine months after injury. The ulnar nerve was enlarged for half an inch under the scar just above the wrist. It was much thickened and bound down by scar tissue. It was freed and wrapped in cargil membrane. I could not identify the cutaneous palmar branch which came off above the lesion. The operation failed to relieve the hyperæsthesia, but when examined four months later the intrinsic muscles of the little finger had regained some power, and the loss of pin-prick was only on the ulnar side of the little finger. On August 7th, 1918, I again searched for the palmar cutaneous branch, but failed to find it. I resected the scar and the surrounding subcutaneous tissue for some inches, so that this branch must have been removed. I found the ulnar nerve still swollen. This operation did not relieve the hyperæsthesia.

Reviews of Books.

War Shock. The Psychoneuroses in War Psychology and Treatment. By M. D. EDER, B.Sc. Lond., M.R.C.S., L.R.C.P. Lond. Pp. 154. London: William Heinemann. (N.D.) Price 5s. net.

The writer is the authorised translator of Freud's book on "Dreams," and he has taken for analysis the first hundred cases of psychoneurosis which came under his care to show how well soldiers suffering from war shock respond to mental treatment, claiming that most shell shock cases can be relieved in a few days. He holds that war shock is hysteria in healthy persons who are specially responsive to psychical stimuli when exposed to the strain of war conditions. Their symptoms are due to mental conflicts. Neuropathic predisposition has little to do with it in the majority of cases. The best treatment is hypnotic suggestion after a psycho-analytical examination. Other forms of suggestion are less rapid and more uncertain. Most cases are well in less than two weeks. Of the true cases, 91.5 per cent. were cured and 8.5 per cent. improved, but in those where neuropathic antecedents existed 62 per cent. only were cured and 27.6 per cent. improved. His description of the clinical symptoms and their explanation is remarkably interesting and valuable; the amblyopias, the left-sided hemianæsthesias, the irritable heart, aphonia, paralyses and spasms, have been carefully studied, though we fear that he is more hopeful of cure than our present knowledge will justify.

The Dietetic Treatment of Diabetes. By R. D. BASU, Major, I.M.S. (retired). Pp. 105. Seventh Edition. The Panini Office, Allahabad. 1916. Price Re. 1.8.

Major Basu's little work is highly interesting, and seven editions have appeared in as many years. He has had to treat diabetes among a vegetarian people, and his directions, in showing how this can be done, embody much sound common sense. Cocoa nut, dâls, ground nuts, unripe bananas, milk and certain preparations of rice, with green vegetables, some fruits and various oleaginous nuts and seeds afford a sufficient and varied diet. He avoids giving carbohydrates in the morning hours, but is apparently anxious to allow them and even wheaten

bread later in the day. It is curious to note that either nut margarine or clarified butter (ghee) are safer than ordinary butter. He is strongly of opinion that diabetes is due to an alimentary toxæmia, but it is doubtful whether any of the theories of diabetes are capable of proof.

The Thyroid Gland, in Health and Disease. By ROBERT MCGARRISON, M.D., F.R.C.P., Major, Indian Medical Service. Pp. xvii., 2v86. London: Baillière, Tindall & Cox 1917. Price 12s. 6d. net.

This handsome volume, the result of many years of investigation, is divided into three parts, the first dealing with the thyroid and parathyroid glands in health, the second with the factors which cause them to depart from health, and the third with the morbid states—including not only goitre and cretinism, but also tetany, myxœdema, and Graves's disease—which result from this departure.

The great fact which has emerged from the author's investigation is that the most common source of the thyroid's derangement is gastro-intestinal toxæmia.

The author concludes his full account of the treatment of Graves's disease by urging the necessity for more careful examination of every case for foci of infection, and the necessity for their early removal. He is not an advocate for surgical interference, nor does he think that serum treatment possesses any specific action. He advocates hygienic rather than medicinal treatment. The book is one for careful study.

Tumours. By Sir J. BLAND SUTTON, LL.D. Sixth Edition. Pp. ix., 790. London: Cassell & Company Ltd. 1917. Price 21s. net.

We heartily welcome this new edition of Sir J. Bland-Sutton's well-known work on Tumours, and we feel grateful both to the author and his publishers for bringing out this new edition during a time when the production of almost anything is attended by unusual difficulty. In a review of the sixth edition of this book there is no need again to refer to its excellence, or its special characters, they are both too widely known, but it may be well to call attention to some of the additions to this edition. A very interesting account is given of the effects of morbid conditions of the pituitary body, both enlargements and tumours. Tumours which have been described as arising in the carotid body are also described. The

enlargement of the thymus gland, which may cause such serious symptoms in infants, and its operative treatment, is also considered. Perhaps it may be thought that as this is not due to the growth of any tumour, it is not quite in place in this work. But Sir J. Bland-Sutton in the old edition of his book includes such morbid conditions as a distended gall-bladder and a hydrocele of the tunica vaginalis, and in this new edition two new diseases not really tumour growths are included—hydrocephalus and spina bifida. We think this unfortunate, as one does not naturally turn to a work on tumours for a description of these conditions. To the numerous and excellent illustrations in the earlier editions of this book eighty new ones are added in this edition. We are sorry to notice the omission in the new edition of the illustration of a skiagram of an odontome, which was a valuable addition to the chapter on odontomas in the last edition.

Blood Pictures: An Introduction to Clinical Hæmatology. By CECIL PRICE-JONES, M.B. Pp. 91. Bristol: John Wright & Sons. 1917. Price 6s. 6d. net.

This is not a text-book of hæmatology, but rather a guide to the interpretation of the elaborate reports on blood examinations made by the pathologists, and is also intended to assist the general practitioner in making examinations for himself. The normal blood picture is first described, and the two principal varieties known as the leucoid and the lymphoid types follow. "Speaking broadly, a leucoid type is associated with a *cæcal* infection, a lymphoid type of blood with a *bacillary* infection, and a lymphoid plus large mononuclear type with a *protozoal* infection." These varieties are further explained in subsequent chapters. The characteristics of some varieties of Anæmia are then indicated, and the blood picture of malignant disease with its utility in the differentiation from non-malignant conditions is considered. An excellent coloured plate showing the phylogenetic relations of blood-cells concludes this very enlightening book, which should be studied by those who are not familiar with the larger text-books.

Insanity in Every-day Practice. By E. G. YOUNGER, M.D. Fourth Edition. Pp. x., 134. London: Baillière, Tindall & Cox. 1917. Price 5s. net.

A fourth edition requires little comment; its previous utility is obvious, and it is now improved by the addition of sections on Neurasthenia and on the Psycho-analysis of Freud. The latter,

so much discussed of late years, has fallen into much disrepute from the exaggeration of the importance of questions of sex, which have been closely associated with the tedious process of psycho-analysis connected with the name of Professor Sigmund Freud, of Vienna. These views have much to commend them when the author's ideas on the sex element are modified.

Dream Psychology. By MAURICE NICOLL, B.A., M.B., B.C. Camb. Pp. ix., 194. London: Oxford Medical Publications. 1917. Price 6s. net.

The analysis of the dream was initiated by Dr. Hughlings Jackson as the key to many problems of psychiatry. Dr. John Abercrombie, Dr. W. B. Carpenter, and others have pointed out that the understanding of dreams is closely linked with the investigation of mind. The theories and demonstrations on cerebral localisation have brought into the forefront the anatomical considerations which have engrossed the attention of psychiatrists and neurologists, but of late physiological has rather taken the place of further anatomical inquiry. The Viennese school under Professor Freud, the pioneer of dream analysis, is being supplanted by the Zurich school of analytical psychology associated with the name of Dr. Jung, from whose point of view the author regards the dream and the interpretation thereof.

The dream is said to arise somewhere out of the psyche, a typical product of the unconscious regions of the human mind, and several schools of psychology are concerned in the study of these unconscious activities.

Nineteen short chapters on the psyche and the problems of the neurotic sum up the views of the author on unconscious cerebration and its phenomena around which so much controversy is accumulating. The author has made a somewhat intricate subject both intelligible and entertaining.

The Prevention of Venereal Diseases. By OTTO MAY, M.A., M.D., M.R.C.P. Pp. 240. London: Oxford Medical Publications. 1918. Price 7s. 6d. net.

During this time of national appreciation of the urgency of the prevention and treatment of venereal diseases Otto May's book appears opportunely.

It presents the case fairly and in judicious language, and should be of service to anyone who is working in an attempt to combat venereal diseases, as well as to those who wish to understand what is being done, or what may be accomplished for that end.

The chapter on " Personal Prevention " is of special value.

Elements of Hygiene and Public Health. By CHARLES PORTER, M.D., B.Sc., M.R.C.P. Edin. Pp. xiv., 411. London: Oxford Medical Publications. 1917. Price 12s. 6d. net.

A text-book for students and medical practitioners written by a physician who is also a barrister-at-law gives the ideal combination for a work on public health. It is not a compilation of laws, tables, statistics, or formulæ, but it is intended to enable the practitioner to answer the question of a healthy individual—How he is to be kept healthy? Attention is concentrated on causations, the individual causes, prevention—the concrete rather than the abstract—and ninety-eight excellent illustrations greatly increase the utility of the text. Twenty-three chapters on all the usual divisions of the whole subject of Sanitation give a concise description of the orthodox views of Sanitarians, and then follow short outlines on School Hygiene, Public Health Administration and Sanitary Laws. A few vital statistics and a very complete index conclude a well-written, well-printed, and well-illustrated volume, which cannot fail to be of much utility for consultation on the many questions of Sanitation which are commonly cropping up from day to day, and on which an authoritative statement is required.

We notice a remark appropriate to the present time outcry for eggs, "Though nutritious and digestible, they cannot be regarded as a cheap substitute for meat." It is obvious that at present prices they are the most expensive source of protein nourishment.

The book should be on the reading table of those whose motto is that of the sanitarian politician: "*Sanitas Sanitatum omnia Sanitas.*"

Trench Fever. Report of Commission. Medical Research Committee, American Red Cross. Pp. vii., 446. Oxford Medical Publications. 1918. Price 21s. net.

It is impossible for any medical man who has spent any length of time on the Western Front not to be interested in this book. Trench Fever was as baffling as any disease could be, and in spite of a mortality of zero, was causing more wastage from the fighting-line than any other disease, with the exception of the ever-present I.C.T. The reviewer well remembers its first appearance in the battalion of which he was in medical charge: how it struck an entire platoon who were sleeping in the cellar of a ruined house in the "support line," and how he was utterly unable, after blood-cultures, etc., for the typhoid group had proved negative, to persuade the A.D.M.S. that anything serious ailed the men, who ran temperatures of 99° odd every evening, with an occasional jump to 101° or so. This was in the summer of 1915. Early in 1916 McNee and others published experiments, in which he transmitted the disease from Trench Fever patients to healthy individuals by direct blood

transfusion. For some mysterious reason no one took much notice, nor were his results confirmed, in spite of the fact that by this time, the spring of 1916, the disease reached quite alarming proportions. A certain number of spasmodic ideas were projected, it is true, and there arose one party who contended that Trench Fever was a *louse-borne* diease, while another party contended with equal fervour on equally insufficient evidence that it was not. On America joining the Allies the American Medical Service realised the importance of the matter. Accordingly, with the cordial co-operation of the R.A.M.C., they set up a commission and started work early in 1918. This book is a report of their labours. It tells of their methods and their findings; how they confirmed McNee's experiments made two years previously and proved incidentally that the different clinical types which we all had learned to recognise were one and the same disease; how the disease is undoubtedly *louse-borne;* and how the organism is a filtrable virus, and has nothing to do with the enteric group. It tells of the precautions they took to prevent error and faulty conclusions. And all this the American Commission did in two months. The report is a monument to organised effort or team-work as opposed to sporadic endeavour. Moreover, the text, written by Major Strong, M.R.C., the head of the Commission, will not jar on the purist, to whom so many American medical publications are anathema.

The Treatment of Infected Wounds. By A. CARREL AND G. DEHELLY. Translation by HERBERT CHILD. Second Edition. Pp. x., 265. London: Baillière, Tindall & Cox. 1918.

Many surgeons have been led by the war to modify their former view of the value of the ordinary antiseptics in infected wounds, and the treatment evolved by M. Carrel in the use of hypochlorite of soda solution is one of the "discoveries" of military surgery.

Whatever view we choose to take of the explanation of the antiseptic efficiency of Carrel's method, the fact remains that he has shown that infected wounds—early or late—can be sterilised by the means he has devised, and no greater tribute can be paid to the successful results so obtained than the words of a printed notice which the writer of this review saw on the walls in M. Tuffier's wards in Paris, where the Carrel treatment was in use: "*Tout blessé qui suppure a le droit d'en demander la raison à son chirurgien.*"

The present volume is a full exposition of the technique described by the originator of this form of treatment, and on comparing the English with the French Edition we can say that the translator has done his work well. The text is elucidated by a considerable number of illustrations.

Editorial Notes.

History of the Bristol Royal Infirmary.

We have received from Dr. A. Lendon an interesting communication suggested by the late Dr. Munro Smith's *History of the Bristol Royal Infirmary*, which we print below *in extenso*. Dr. Lendon, who will be remembered by several of the senior members of the Royal Infirmary staff, has attained a distinguished position in the medical profession of Australia.

"The *History of the Bristol Royal Infirmary* by the late Dr. G. Munro Smith possesses an interest for at least four persons in this city, three of whom are medical men. The layman is the Hon. Sir John Langdon Bonython, C.M.G., a collateral descendant of that Dr. John Bonython who was one of the principal founders of the Infirmary. Sir Langdon, who came to South Australia as a child, has worked his way up by sheer industry and talent from a humble position to become the proprietor of the chief daily newspaper of this State. His residences are named 'Carclew' and 'Carminow,' after the places in Cornwall with which his ancestors were connected, and he claims to be the head of the well-known family which formerly flourished in the 'Delectable Duchy.'

"Recently the Medical Superintendent of the Adelaide Hospital was Dr. Charleton Yeatman, a graduate of the Adelaide University, and now Lieut.-Col. and C.O. of the Australian Hospital at Harefield. In the *History* the name of Charleton Yeatman occurs as that of the Resident Apothecary for a few months in 1783, whilst a brother of his, Morgan Yeatman, was Surgeon to the Infirmary at the same time. Dr. Charleton Yeatman's father (Dr. J. W. Yeatman) has been practising at Auburn, a township some forty miles

from Adelaide, for thirty-six years. He tells us that the Apothecary (C.Y.) of 1783 was his great-grandfather, and that as his parents were second cousins of the same name he is therefore descended from the Surgeon as well as from the Apothecary in a direct line.

"The longest registered practitioner remaining on the South Australian Roll is John Sprod, M.R.C.S.: he is a native of South Australia, and he went to England in 1868 for his medical education. He was a surgical pupil attached to Mr. Leonard Crosby for two years, and was clinical clerk to Dr. Farebrother. He qualified in 1873, and returned next year to Adelaide.

"The fourth person is myself. I was House Surgeon—there was then only one—from 1879 to 1883. My resident colleagues at first were the Medical Superintendent, J. H. Lee Macintire (his name is incorrectly spelt on p. 359), and the House Physician, Dr. James Scott; the latter shortly afterwards resigned, and Macintire, myself, and Dr. C. H. Watson, were joint residents, till Watson left at Christmas, 1882, and I myself at Easter in the following year. J. Paul Bush succeeded Watson and then took my place.

"On page 355 there is, if my recollection of an event which took place nearly four decades ago be accurate, a slight error. The Lister demonstration took place, I think, in a large underground room of the central block, presumably the Out-Patient Waiting Room and not in the Museum. I may be wrong also in another respect, but I fancy the case was one of a large 'cold' abscess of the upper arm, but this is a trifling matter. I assisted Mr. Lister: we had reserved for his choice other cases, such as tumour and an amputation, but he preferred to demonstrate his method on this simple class of case, for it was in such that he won his early triumphs over sepsis.

"I perhaps ought to apologise for such a lengthy epistle,

but I thought your readers would like to know that the *History* was appreciated at the Antipodes and that 'Caelum, non animum, mutant qui trans mare currunt.'"

* * * * *

Postgraduate Courses.

In "Medical Notes" will be found a notice which has been widely circulated amongst the medical men of Bristol and the neighbourhood, and, we are glad to say, has met with an excellent response. The weekly demonstrations have been very well attended, and many busy practitioners from distant country districts have been present at the meetings. In addition quite a number of medical men have taken posts at one or other of the Institutions as Clinical Assistants.

We should like to draw the attention of those taking the course to the fact that they may attend clinical rounds in the wards and visit the out-patient and special departments whenever they choose to avail themselves of the opportunity. They are entitled to a total number of attendances equivalent to one month's study, and such attendances may be distributed over any part of the present course.

We wish this new departure every success, and trust that it may undergo a great development in future years.

* * * * *

The Case of Dr. J. H. Bell.

In our last issue attention was directed to the case of Dr. John Henderson Bell, of Chelsea, who was at that time in prison, sentenced under the Defence of the Realm Act on evidence so flimsy that we could not escape the conviction that it was a miscarriage of justice. An appeal to the Home Secretary for re-trial had been

refused on the ground that no fresh evidence had been adduced since the conviction, but as no fresh evidence was possible, if one could dignify the grounds of the doctor's conviction by the term evidence, one must be thankful that the consideration by the General Medical Council of the question of striking off the prisoner's name from the Register afforded this judicial body the opportunity of finding that Dr. J. H. Bell had not been guilty of " infamous conduct in a professional sense." Consequently he was set free. The trial scene in *Alice in Wonderland* may be very funny in real life but was a dignified procedure compared with this case in British law. One must hope that time and a continuance of his useful, upright life will enable Dr. Henderson Bell to forgive and to forget this painful episode in which, among all those concerned, he was the most creditable figure.

* * * * *

The Late Sir Barclay Josiah Baron.

THE universal expressions of deep regret which the news of the untimely death of this distinguished colleague called forth in this city is most fully shared by the Editorial Staff of this Journal, for which he did good work in years gone by. We confess to a sense of jealousy in that the claims of civic life had made such inroads on his time and interest during the latter years of his busy life ; but he proved himself a man of parts in so many directions and undoubtedly was of very great public service during the two years he filled the office of Lord Mayor during the earlier years of the Great War with dignity and in a manner that few of his fellow-citizens could have equalled and none could have excelled. We had looked forward to his enjoying his well-won honours for many years and to his resuming more fully his work as a laryngologist.

Closing of the 2nd Southern General Hospital.

WHILE it is impossible to make an adequate reference here to the work accomplished by the 2nd Southern General Hospital during the War, the closing down of the great Military Hospital organised in our midst demands a note and calls forth the admiration for the sustained effort of those whose work did such yeoman service in the time of national need and peril.

The new King Edward VII. wing of the Bristol Royal Infirmary had been offered for use as a Military Hospital in the event of war long before the Great War was dreamt of, and immediately war was declared Lieut.-Colonel Paul Bush, C.M.G., as he then was, called his *à la suite* staff together and under the Director-General organised for the Royal Army Medical Corps the 2nd Southern General Hospital, with the Royal Infirmary block as the organising centre, till with its various sections and auxiliary hospitals about 5,800 beds were provided, and during the war very little short of 100,000 patients were dealt with. It had been in full working order for three years under the administration of Lieut.-Colonel Bush, when he was sent to France to organise a hospital at the base as Colonel Bush, and was succeeded as O.C. of 2nd Southern General Hospital by Lieut.-Colonel Prowse. On another occasion we hope to record in more detail the great work that was done in Bristol and throughout a widely extending neighbourhood by the 2nd Southern General Hospital.

* * * * *

War Honours.

To our many colleagues and the men of the Bristol School who have received honourable distinctions for their war services since our last issue we offer warm congratulations. On another page we give a list of

their names and honours, but we may be excused in specially mentioning here the granting of a C.B.E. to Colonel Paul Bush, C.M.G., A.D.M.S., Colonel James Swain, C.B., Colonel H. Thurston, C.B., C.M.G., Colonel P. G. Stock, D.S.O., Lt.-Colonel J. H. Parsons, and Capt. Hele.

* * * * *

Hospital Amalgamation.

It has often been said that the chief factor in modern social and political developments has been the immense improvement which has taken place in means of communication and transport. The result of bringing distant parts of the world so close together has been, in all spheres of activity, an enlargement of the effective unit of competition. Towns which were formerly rivals have to combine against distant competitors; large businesses amalgamate; where formerly small states competed with one another international leagues are instituted to carry out wider programmes of rivalry.

To turn from international to domestic matters, it has become apparent to many both inside and outside the profession that in Bristol there is no longer room for rivalry between the various hospital institutions, and that if the city is to maintain its position as a centre for the advancement and teaching of medical science, it must be ready to compete as a combined unit with the other large cities of the kingdom, and of the empire. These ideas have begun to take practical form. A committee consisting of representatives of the governing bodies and professional staffs of the leading hospitals of the city has been formed and is considering a scheme for amalgamation of both the administrative and medical work of these institutions. Additional stimulus has been given to the movement by the action of the Board of Education, which is prepared to assist medical

education and research in a very substantial way by means of grants from national revenue. To obtain the full benefit of this scheme it is, in the opinion of the medical staffs, essential that their resources should be combined; and this, we understand, is also the view taken by the Board of Education. From the financial and administrative point of view there are obvious advantages in amalgamation, as it will avoid much duplication of apparatus and overlapping of interests, while it will enable all purchases to be made in larger quantity and at a cheaper rate. There are, of course, difficulties in detail, but none are insuperable, and it is to be hoped and expected that before long Bristol will possess a centralised and amalgamated system of medical institutions which will enable it to more than hold its own among the great centres of medical activity in the kingdom.

The Library of the Bristol Medico-Chirurgical Society.

NINETY-SEVENTH LIST OF BOOKS.

The following books have been received since the publication of the list in December, 1916:—

25th March, 1919.

Anders, J. M.	*Practice of Medicine*, 2 vols.	4th Ed.	1900
Atkinson, W. B.	*Therapeutics of Gynæcology of Obstetrics*	2nd Ed.	1881
Atthill, L.	*Diseases of Women*	6th Ed.	1880
Auerbach, S.	*Headache* (Trans. by E. Playfair)		1913
Ball, Sir C. B.	*Diseases of the Rectum*	2nd Ed.	1910
Ballenger and A. Wippern, W.	*Diseases of Eye, Ear, Nose and Throat*		1902
Barcroft, J.	*Respiratory Function of the Blood*		1914
Bastedo, W. A.	*Materia Medica and Pharmacology*		1913
Basu, B. D.	*Dietetic Treatment of Diabetes*	9th Ed.	1918
Bayliss, W. M.	*Principles of General Physiology*	2nd Ed.	1918
Bennet, W.	*Toxicological Chart*		1826
Bennett, R. R.	*Medical and Pharmaceutical Latin*		1906

Binet and T. Simon, A. *Mentally Defective Children* (Trans. by W. B. Drummond) .. .. [1914]
Bristowe, W. R. .. *Treatment of Joint and Muscle Injuries* 1917
Browning, C. H. .. *Applied Bacteriology* 1918
Browning and I. McKenzie, C. H. *Recent Methods in Diagnosis of Syphilis* 1912
Broca, A. .. .. *Ligations and Amputations* (Trans. by E. Ward) 1917
Buchanan, R. J. M. *The Blood in Health and Disease* 1909
Buckmaster, G. A. *The Morphology of Blood* 1906
Burkett, W. C. .. *Bibliography of W. C. Welch* 1917
Caird and C. W. Cathcart, F. M. *Surgical Handbook* .. ..15h Ed. 1910
Campbell, H. .. *Aids to Pathology* .. .. 3rd Ed. 1915
Campbell, H. J. .. *Elementary Biology* .. .. 2nd Ed. 1895
Carrel and G. Dehelly, A. *Treatment of Infected Wounds* (Trans. by H. Child) .. .. 2nd Ed. 1918
Carter and W. A. Frost, R. B. *Ophthalmic Surgery* 1887
Catalogue (Index-) of the Library of the Surgeon-General's Office, U.S.A., 2nd Series, Vols. XIX.—XXI. 1914–16
Chaplin, H. D. .. *Infant Feeding* 1903
Chaucer, G. .. .. *The Prologue to the Canterbury Tales* (Ed. by W. W. Skeat) .. .. 3rd Ed. 1900
Cheadle and F. J. Poynton, W. B. *Artificial Feeding of Infants* 6th Ed. 1906
Cohen, J. B. .. .. *Organic Chemistry* .. .. [1912]
Colbeck, E. H. .. *Diseases of the Heart* .. .. .. 2nd Ed. 1905
Corbin and A. M. Stewart, H. E. *Handbook of Chemistry and Physics* 4th Ed. 1911
Cripps, R. A. .. *Galenic Pharmacy* 1893
Cushny, A. R. .. *Pharmacology and Therapeutics* .. 5th Ed. 1910
Cyclopædia of English Literature, 2 vols. 1858–60
Da Costa, J. C. .. *Modern Surgery* .. .. 4th Ed. 1904
Daw, S. W. .. .. *Orthopædic Effects of Gunshot Wounds* 1919
Dawson, E. R. .. *The Causation of Sex in Man* .. .. 2nd Ed. 1917
Daniell, A. .. .. *Principles of Physics* 1884
Davies, T. .. .. *Preparation of Microscopic Objects* 2nd Ed. 1873
Dawson, Sir B. .. *The Nation's Welare* 1918
Donald, A. .. .. *Introduction to Midwifery* .. .. 5th Ed. 1902
Dorland, W. A. N. *Illustrated Medical Dictionary* .. 7th Ed. 1913
Dunman, T. .. .. *Electricity and Magnetism* 1888
Eder, M. D. .. .. *War Shock* 1917
Elliott, R. H. .. *Glaucoma : Handbook for General Practitioners* 1917
„ .. *Glaucoma : A Handbook for Students* 1918
„ .. *The Indian Operation for Couching for Cataract* 1917
Emery, W. D. .. *Clinical Bacteriology* .. .. .. 5th Ed. 1917
Encyclopædia Medica, Vol. I.—V... .. .. 2nd Ed. 1915–17
Faught, F. A. .. *Blood Pressure* 1913
Fiske, A. .. .. *Structure amd Functions of the Body* 1911
Fothergill, J. M. .. *Aids to Rational Therapeutics* 1881

French, H. [Ed.] .. *Index of Differential Diagnosis* .. 2nd Ed. 1917
Friel, A. R. .. .. *Obiter Scripta : Throat, Nose and Ear* 1914
Fuchs, L. .. .. *De medendi methodo libri quatuor* 1539
Furneaux, W. S. .. *Elementary Chemistry* 1890
Gadd, H. W. .. .. *The Poisons and Pharmacy Act*, 1908 1909
Garson and C. H. Read, J. G. *Notes and Queries on Anthropology* 2nd Ed. 1892
Garton, W. .. .. *Electro-Therapeutics* 1917
Gay, F. P. .. .. *Typhoid Fever* 1918
Godlee, Sir R. J. .. *Lord Lister* 1917
Gould, Sir A. P. and E. P. *Surgical Diagnosis* .. .. .. 5th Ed. 1919
Gray, H. .. .. *Anatomy* (Ed. by R. Howden) .. 20th Ed. 1918
Greenish, H. G. .. *Introduction to Materia Medica* 1899
Greenwood, W. O. *Scopolamine-Morphine* 1918
Hampson, W. .. *Radium Explained* 1905
Harrison, L. W. .. *Venereal Diseases* 1918
Hayes, R. .. .. *Intensive Treatment of Syphilis* 1917
Hebblethwaite, S. M. *Notes on General Practice* 1905
Hektoen and D. Riesmann, L. *Text-Book of Pathology*, 2 vols. .. 1901
Hewer, Mrs. J. L. .. *Our Baby* .. .. 16th Ed. 1918
Hewlett, R. T. .. *Pathology* 1906
Hinshelwood, J. .. *Congenital Word Blindness* 1917
Hoblyn, R. D. .. *Dictionary of Terms* (Ed. by J. A. Price) 12th Ed. 1892
Hoffman, F. L. .. *Mortality from Cancer throughout the World* .. 1915
Holden, L. .. .. *Human Osteology* (Ed. by C. Stewart) 8th Ed. 1899
Holt, L. E. .. .. *Diseases of Infancy and Childhood* 1900
Huggins, G. M. .. *Amputation Stumps : Care and Treatment* .. 1918
Humphrey, J. .. *Materia Medica* .. .. 2nd Ed. 1907
Hurst, A. F. .. .. *Medical Diseases of the War* 1916
Hyde and F. H. Montgomery, J. N. *Diseases of the Skin* .. 5th Ed. 1900
Infectious Diseases in Schools, Rules for Preventing 1916
Jago, W. .. .. *Inorganic Chemistry* .. .. 2nd Ed. 1890
James, W. .. .. *Psychology* .. .. [1892]
Johnston, J. F. W. *The Chemistry of Common Life*, 2 vols. .. 1854–55
Jones and L. J. Llewellyn, A. B. *Malingering* 1917
Jones, R. .. .. *Notes on Military Orthopædics* 1917
Jordan, E. O. .. *General Bacteriology* .. .. 6th Ed. 1918
Keith, A. .. .. *The Human Body* .. .. [N.D.]
Kidd, F. .. .. *Common Diseases of the Male Urethra* 1917
Knox, R. .. .. *Radiography and Radio-Therapeutics.* Vol. I. 1917
Lamb, W. .. .. *Diseases of the Nose, Throat and Ear* 4th Ed. 1917
Lane, Sir A. .. .. *Operative Treatment of Chronic Intestinal Stasis* .. .. 4th Ed. 1918
Lewis and A. Balfour, C. J. *Public Health* 1902
Lownds, L. .. .. *First Book of Physics* 1910
Lucas, E. W. .. *Practical Pharmacy* 1898
McDonald, D. M. .. *Practical Prescribing and Treatment* 1915

McGarrison, R. ..	*The Thyroid Gland in Health and Disease* ..		1917
McKendrick, A. ..	*Back Injuries*		1916
MacKenzie, W. C.	*The Action of Muscles*		1918
Macleod, J. M. H.	*Burns and their Treatment*		1918
Malley, A. C. ..	*Photo-Micrography*	2nd Ed.	1885
Manson, Sir P. ..	*Tropical Diseases*	6th Ed.	1917
Marshall, C. R. ..	*Manual of Prescribing*		1908
Martin, S.	*Manual of General Pathology*		1904
Maudsley, H. ..	*Responsibility in Mental Disease*		1874
Maxwell, W. H. ..	*Ventilation, Heating and Lighting* ..	2nd Ed.	1907
May, O.	*The Prevention of Venereal Diseases*		1918
Mercier, C. A. ..	*Crime and Insanity*		[N.D].
Morison, Sir A. ..	*Insanity*	4th Ed.	1848
Morison, R.	*Bipp Treatment of War Wounds*		1918
Morris, E. W. ..	*History of the London Hospital*		1910
Morris, Sir M. ..	*The Nation's Health*		1917
,, ..	*Diseases of the Skin*	6th Ed.	1917
Muir and J. Ritchie, R.	*Manual of Bacteriology*	7th Ed.	1919
Muirhead, I. B. ..	*Extra-Ocular Pressure and Myopia*		1916
Myers, C. S.	*Introduction to Experimental Psychology* ..		1912
Newth, G. S.	*Inorganic Chemistry*	12th Ed.	1907
,, ...	*Chemical Lecture Experiments* ..	2nd Ed.	1908
,, ...	*Elementary Practical Chemistry*		1904
Nicoll, M.	*Dream Psychology*		1917
Noble, D.	*The Human Mind*		1858
Nunn, A. W. ..	*Materia Medica*		1911
Oliver, J. W.	*Elementary Botany*	17th Ed.	1908
Page, C. M.	*Medical Field Service Hand-book*		1919
Parkes and H. R. Kenwood, L. C.	*Hygiene and Public Health*	6th Ed.	1917
Parsons, H. F. ..	*Isolation Hospitals*		1914
Paterson, A. M. ..	*Anatomy of Peripheral Nerves*		1919
Pathology (*Catechism Series*).	Part IV.	2nd Ed.	1917
Penhallow, D. P. ..	*Military Surgery*	2nd Ed.	1918
Pickering, C. ..	*The Races of Man*	New Ed.	1850
Pilley, J. J.	*Hygiene*	3rd Ed.	1888
Porter, C.	*Hygiene and Public Health*		1917
Power, D'A.	*On Cancer of the Tongue*		1919
Poyser, A. W. ..	*Magnetism and Electricity*	10th Ed.	1903
Price, F. W.	*Diseases of the Heart*		1918
Price-Jones, C. ..	*Blood Pictures*		1917
Proctor, B. S. ..	*Practical Pharmacy*	3rd Ed.	1892
Pye, [W.]	*Surgical Handicraft* (Ed. by W. H. Clayton-Green)	8th Ed.	1919
Ramsbotham, F. H.	*Obstetric Medicine and Surgery* ..	5th Ed.	1867
Reinhardt, C.	*Mental Therapeutics*	3rd Ed.	1914
Remsen, I.	*Organic Chemistry*	3rd Ed.	1899
,, ...	*Elements of Chemistry*		1905
Research Defence Society, Publications of the			1909

Riverius, L. .. .. *The Compleat Practice of Physick* 1655
Riviere, C. .. .. *Pneumothorax Treatment of Pulmonary Tuberculosis* 1917
Roberts, W. .. .. *Lectures on Dietetics and Dyspepsia* 1885
Roberts, W. G. A... *Clinical Diagnosis* 1896
Royle, J. F. .. .. *Materia Medica* (Ed. by J. Harvey) 6th Ed. 1876
Roscoe and C. Schorlemmer, H. E. *Treatise on Chemistry.* Vols. I; II., Pt. I.; III., Pt. I. 1880–81
Sankey, W. H. O. *Mental Diseases* 1866
Savage, W. G. .. *Bacteriological Examination of Food and Water* 1914
Sachs, J... .. .. *Text-Book of Botany* .. .. .. 2nd Ed. 1882
Schafer, E. A. .. *Experimental Physiology* .. .. .. New Ed. 1916
Schmiedeberg, O. .. *Elements of Pharmacology* 1887
Semple, C. E. A. .. *Materia Medica and Therapeutics* 1892
Shaw, T. C. .. .. *Ex Cathedrâ Essays on Insanity* 1904
Short, A. R. [Ed.].. *Index of Prognosis* .. .. 2nd Ed. 1918
Simon, W. .. .. *Manual of Chemistry* .. .. .. 8th Ed. 1905
Smith, J. L. .. .. *Diseases of Infancy and Childhood* .. 5th Ed. 1881
Squire, P. W. .. *Pocket Companion to the P.B.* .. 2nd Ed. 1908
,, .. *Companion to the B.P.* .. .. ..18th Ed. 1908
Stark, A. C. .. .. *Aids to Practical Pharmacy* 1898
Stewart and E. S. Lawrence, D.D. *Essentials of Medical Electricity* 1893
Stewart, R. W. .. *Magnetism and Electricity* .. .. 3rd Ed. 1898
Stewart, Sir T. G... *Lectures on Giddiness, etc.* .. .. 2nd Ed. 1898
Sutton, E. .. .. *Naval Hospital Ship* 1918
Sutton, J. B. .. .. *Tumours: Innocent and Malignant* 6th Ed. 1917
Taine, H. .. .. *On Intelligence* (Trans. by T. D. Haye) .. 1871
Tanzi, E. .. .. *Text-Book of Mental Diseases* (Translated) .. 1909
Taylor, J. .. .. *Paralysis and other Diseases of Nervous System* 1905
Theobald, S. .. .. *Prevalent Diseases of the Eye* 1907
Thompson, C. J. S. *Compendium of Pharmacopœias* .. 4th Ed. 1914
Thompson, M. .. *The Apothecaries' Hall Manual* 1903
Thorne, L. T. .. *The "Nauheim" Treatment* .. .. 5th Ed. 1918
Thornton, E. G. .. *Dose-Book and Manual of Prescription Writing* 2nd Ed. 1901
Thorpe and M. Muir, T. E. *Qualitative Chemical Analysis*.. 2nd Ed. 1878
Topinard, P. .. .. *Anthropology* (Translated) 1894
Treves, Sir F. .. *Surgical Applied Anatomy* (Ed. by A. Keith and W. C. Mackenzie) .. .. .. 7th Ed. 1918
Underhill, F. P. .. *Physiology of the Amino Acids* 1915
Upcott, H. .. .. *Antiseptic Methods* 1907
Walford, W. G. .. *Dangers in Neck Wear* 1917
Walker, C. E. .. *Hereditary Characters and their Mode of Transmission* 1910
White and J. Humphreys, E. *Pharmacopœdia* .. .. .. 2nd Ed. 1909
Watson, C. .. .. *Lectures on Medicine for Nurses* 1917
Whiteford, C. H. .. *Acute Appendicitis* 1917

Whitla, Sir W. ..	*Theory and Practice of Medicine*, 2 vols. ..		1908
Wills, G. S. V. ..	*Manual of Practical Analysis*	11th Ed.	[N.D.]
„ ..	*Elements of Pharmacy*	9th Ed.	1908
Winckel, F.	*Diseases of Women* (Trans. by F. Parvin) ..	2nd Ed.	1890
Wise, T. A.	*Hindu System of Medicine*		1845
Whittaker, C. R. ..	*Surgery* (*Catechism Series*). Part V.	3rd Ed.	1917
Wateson, [G.] ..	*The Cures of the Diseased* [Reprint]. (Ed. by C. Singer)		1915
Webb-Johnson, A. E.	*Surgical Aspects of Typhoid and Para-Typhoid Fever*		1919
White, W. H. ..	*Materia Medica*	16th Ed.	1918
Wilson, R. M. ..	*The Hearts of Man*		1918
Wingfield, H.	*Forms of Alcoholism and their Treatment* ..		1919
Winslow, F.	*The Anatomy of Suicide*		1840
Wood, R. C.	*The Soldier's First Aid*		1917
Yealland, L. R. ..	*Hysterical Disorders of Warfare*		1918
Younger, E. G. ..	*Insanity in Everyday Practice* ..	4th Ed.	1917

TRANSACTIONS, REPORTS, JOURNALS, etc.

American Association of Obstetricians and Gynecologists, Transactions of the	Vols. XXVII.—XXX.	1914–17
American Journal of Obstetrics	Vols. LXX.—LXXIII.	1915–16
American Journal of Ophthalmology, The	Vol. XXXII.	1915
American Journal of Surgery, The		1914–15
American Journal of the Medical Sciences ..	Vols. CXLVIII—CL.	1914–16
American Laryngological Association, Transactions of the.. ..		1914–17
American Laryngological, Rhinological and Otological Society, Transactions of the..		1915–17
American Ophthalmological Society, Transactions of the ..		1915–18
American Pediatric Society, Transactions of the	Vols. XXVI.—XXVIII.	1914–16
American Surgical Association, Transactions of the	Vols. XXXII.—XXXV.	1914–17
Boston Medical and Surgical Journal, The	Vols. CLXXI.—CLXXIV.	1914–16
Brain, Vols. IX.—XXXIX, 1887–1917; Index Vols. I.—XXIII. ..		1902
Bristol Health Report		1916
Bristol Medico-Chirurgical Journal, The	Vols. XXXII., XXXIII.	1914–15
British Journal of Dermatology		1914–15
British Journal of Tuberculosis	Vols. VIII., IX.	1914–15
British Medical Journal, The	Vol. II., 1914—Vol. II.,	1918
Bulletin de l'Académie de Médecine		1914–15
Canadian Medical Association Journal	Vols. IV., V.	1914–15
College of Physicians of Philadelphia, Transactions of the	Vols. XXXVI.—XXXIX.	1914–17
Edinburgh Medical Journal, The	N.S., Vols. XIII.—XVI.	1914–16

English Catalogue of Books for 1915 1916
Glasgow Medical Journal .. .. Vols. LXXXII.—LXXXV. 1914–15
Hospitals—
Episcopal Hospital Reports .. .. Vols. III., IV. 1915–16
Guy's Hospital Reports .. .. .. Vols. LXVIII., LXIX. 1914–18
Johns Hopkins Hospital Reports .. .. Vol. XVII. 1916
St. Bartholomew's Hospital Reports .. .. Vols. LI., LII. 1915–16
St. Thomas's Hospital Reports .. .. Vols. XLII.—XLIV. 1913–18
Indian Medical Gazette .. .. Vols. XLIX., L. 1914–15
International Abstract of Surgery.. .. .. Vols. XX.—XXII. 1915–16
Ireland, Transactions of the Royal Academy of Medicine in
Vol. XXXV. 1917
Jahrbericht über die Neurologie und Psychiatrie 1899–1912
Johns Hopkins Hospital Bulletin .. .. Vols. XXV., XXVI. 1914–15
Journal of Experimental Medicine .. .. Vol. XX. 1914
Journal of Laryngology .. .. Vols. XXIX., XXX. 1914–15
Journal of Medical Research .. .. Vol. XXXIV. 1916
Journal of Mental Science .. .. Vol. LXI. 1915
Journal of Tropical Medicine .. .. Vol. XVIII. 1915
Lancet, The .. .. Vols. II., 1914—Vol. II. 1918
London Dermatological Society, Transactions of the.. 1914–19
Medical Annual, The 1915–18
Medical Officer, The.. .. .. Vols. XII.—XV. 1915–16
Medical Press and Circular, The .... Vol. CLII. 1916
Medical Record.. .. .. .. Vols. LXXXVIII., LXXXIX. 1915–16
Medical Review .. .. Vol. XVIII. 1915
Medical Society of London, Transactions of the
Vols. XXXVII.—XL. 1914–17
New York Obstetrical Society, Transactions of the 1911–13
New Zealand Medical Directory, The 1915
Ophthalmological Transactions .. Vols. XXXV.—XXXVIII. 1915–18
Parasitology .. .. Vol. VII. 1914
Pharmaceutical Society, Calendar of the 1916–17
Philippine Journal of Science, Index to Vols. I.—X. 1917
Practitioner, The .. .. Vols. XCIII.—XCVI. 1914–16
Quarterly Journal of Medicine .. .. .. Vols. VII., VIII. 1914–15
Royal College of Physicians of London, List of Fellows, etc. 1917
Royal Society of Medicine, Proceedings of the Vols. VII., VIII. 1914–15
Smithsonian Report.. 1914–17
Studies from the Department of Pathology, Columbia University
Vols. XV., XVI. 1916–17
Surgery, Gynecology and Obstetrics .. .. Vols. XXII., XXIII. 1915–16
Therapeutic Gazette .. .. Vol. XXXIX. 1915
West London Medical Journal .. .. Vol. XX 1915
Year-Book of Scientific and Learned Societies 1917

The subscription to Lewis's Medical and Scientific Library has been resumed. The Hon. Librarian will be pleased to obtain from that source any books desired by members of the Medico-Chirurgical Society.

Meetings of Societies.

Annual Meeting, December 11th, 1918.

After a vote of thanks to the retiring President, Mr. F. Lace, had been passed, Major R. G. Poole Lansdown took the chair, and gave an introductory address (*see* p. 33). Later a cordial vote of thanks was given to Major Lansdown for the very interesting and instructive address he had delivered.

The following are the officers of the Society for the Session 1918–19: President—R. G. P. Lansdown, M.D., B.S. Durh.; President-Elect—I. Walker Hall, M.D. Vict. Committee (*ex officio*)—Frederick Lace (retiring President); P. Watson-Williams, M.D. Lond. (Editor of *Journal*); C. K. Rudge (Hon. Librarian); J. M. Fortescue-Brickdale, M.A., M.D., B.Ch. Oxon. (Editorial Secretary). (*Elected*)—George Parker, M.A., M.D. Cantab.; R. Shingleton Smith, M.D., B.Sc. Lond. (*ex Presidents*); J. Lacy Firth, M.D., M.S. Lond.; J. O. Symes, M.D. Lond.; L. E. V. Every-Clayton, M.D., B.S. Lond.; W. A. Smith, M.A., M.B.; T. Carwardine, M.S.; D. C. Rayner. Hon. Secretary—A. J. Wright, M.B., B.S. Lond.

April 9th, 1919.

The President, MAJOR R. G. POOLE LANSDOWN, in the Chair.

The meeting was devoted to a discussion of **The principles and practice of postgraduate study and instruction in the University and Medical Institutions of Bristol.**

Obituary.

BARCLAY JOSIAH BARON, KNIGHT.

THE loss to Bristol from the death of Sir Barclay Baron is indeed a very heavy one, both as the loss of a wise municipal councillor and as a member of our own profession. As the great civic loss which Bristol has sustained by his death has been referred to at length in the daily press, we do not intend to refer to it here, except to say that his mental ability and power as Lord Mayor was only such as those who knew him in his professional life might have anticipated. We would rather in this notice refer to his very brilliant intellectual qualities as manifest in our knowledge of him as a colleague in the work of the medical profession.

That Sir Barclay Baron's intellectual attainments were of the highest order was first shown by the success of his university career at Edinburgh, where he was the first student of his year out of several hundred, and took the Ettles Scholarship in 1881, and several prizes and medals; and later by the character of his work in his own special branch of medicine, and his ability as an exponent of it, and by his grasp of, and judgment on, matters requiring important consideration, He combined with this high intellectual attainment, that gift of fluent speech which made him such an interesting companion in private, and such an able public speaker, and those social qualities which made it a pleasure to so many of his colleagues to have intercourse with him. We well remember the mntual reciprocation of constant friendly feeling between Sir Barclay and two of his colleagues who have also been lost to us—Dr. Markham Skerritt and Dr. Aust Lawrence. They served to form a very effective combination for mutual help, good comradeship and influence.

Sir Barclay Baron was born in 1857, and was 61 at the time of his death. He was a member of an old Quaker family of Plymouth. For eighteen years he had charge of the Throat and Nose Department at the General Hospital, and of this department he was the founder. He did a very large amount of most valuable work for the hospital in this department, and he continued this work until the demands of a large private practice in this branch of medicine made it impossible. His advice in difficult cases, in his special line of work, was very widely sought by the medical profession in Bristol and elsewhere in the West of England, and during the period of the war he was appointed as one of the consulting larnygologists for the Southern Command. At Edinburgh he was Assistant to the Professor of Pathology, and at one time he lectured on Pathology in the Bristol Medical School, and fortunate were the students who had so fluent a lecturer.

Old members of the Bristol Medico-Chirurgical Society will remember the time when Sir Barclay Baron was its genial President, and his very interesting Presidential Address, and workers in his own special department who were members of the British Laryngological Association will recall his Presidency of that Society also. He was also President of the Bath and Bristol Branch of the British Medical Association.

But Sir Barclay Baron had other interests besides municipal and profession work. He was an active agent in the establishment of the Playgoers' Club, where various dramatic works were read and discussed. He had for many years been in close connection with many actors, as their adviser with regard to voice production and those throat and larynx troubles to which they are liable. He was also much interested in art, and was a

member of the Savage Club, a local society, mainly of artists. His ability as a public speaker made him a very welcome guest at the dinners of some of those societies founded by natives of various districts, such as the Caledonian and the Devonian Societies.

It may interest readers of this Journal to know something of our colleague's last illness. He was pulling down the dead branch of a tree in his garden on May 25th, when it broke off before he expected, and he fell, striking the lower part of the left side of his chest on a large stone. He was much distressed after the fall, but not more than a fracture of some ribs would account for, and he obtained considerable relief when the injured side of the chest was supported by strapping, and there was no emphysema or other evidence of damage to the lung, or abdominal injury, but he retched several times. The day following the accident his temperature rose to 102°, and he suffered from marked headache, and some abdominal distension. The pyrexia continued for some days, the temperature keeping at 100° to 101°, and was not explainable in connection with the accident. It was suggested to Sir Barclay that if he had not had the accident this pyrexial condition would be labelled influenza, as almost all mysterious pyrexial conditions now are, but a few days later he expressed his belief that what had been suggested in joke was really true, and he traced the infection to riding in a crowded omnibus with many sick-looking, coughing people three days before the accident, and this he said was his usual incubation period for influenza, of which he had many attacks. After the subsidence of this pyrexial condition he was most unfortunately attacked in the middle of the night with a horrible condition of severe pain in the lumbo-sacral region so tha the literally could not move an inch in the bed. This was an apyrexial condition, and was greatly relieved by aspirin. It lasted almost until his death, for it was only an hour before he died that he was able to sit up in bed for the first time for several days. He had had many of these attacks of lumbago. For this condition, and the anorexia due to his inability to have any action of the bowels on account of the impossibility of the slightest movement in bed, he was seen by a physician on Friday evening, June 6th. He examined his abdomen and found nothing abnormal, and a perfectly normal pulse, and did not entertain any idea that he was in a critical condition. At 1.0 a.m. next morning Sir Barclay woke up and complained of headache. This was relieved by a cup of tea. At 3.0 a.m. he sat up in bed, which he had not been able to do for several days, and as soon as he raised himself into the sitting position he felt faint, and his breathing became laboured, and by 4.0 a.m. he was dead.

Local Medical Notes.

University of Bristol.—The undermentioned students have recently passed the examinations noted :—

M.B., Ch.B.—*Second Examination, Part I.*: F. H. Bodman, J. R. Duerden, J. M. Evans, J. E. S. Hamilton, F. J. Hector, Marguerite G. Hughes, Frances M. Jones, Muriel V. Joscelyne, A. J. Keevil, E. C. K. Kenderdine, F. Langford, Carrie H. Osmond, Doris M. Pullen, J. A. L. Roberts, Dorothy Staley, I. Williams. *Part II.:* Phyllis Beames, A. W. Fawcett, Madge E. Golding, Winifred G. Nott, P. Phillips, J. A. Prichard, Hilda E. Reynolds, Victoria S. Tryon.

Final Examination, Part II.: Evelyn B. Salter, Elizabeth Casson, A. D. Symons, A. G. Bodman, R. F. White. *Part I.:* S. Datta, T. H. A. Pinniger.

D.P.H.—J. Wesley Gilbert.

Conjoint Examining Board of London.—*Medicine:* G. A. Pennant. *Midwifery:* B. A. Astley-Weston, A. E. Young, H. E. Archer.

University of Bristol.—Postgraduate Studies (Clinical Section). Weekly Clinical Demonstrations at the Royal Infirmary and General Hospital alternately, on Thursdays, 2.30—3.30 p.m., during May, June, July, October, November, December, 1919.

A course of Clinical Demonstrations has been arranged for Medical Practitioners by the University. Each demonstration will be given by a "team" composed of a Physician, a Surgeon, a Pathologist or a Specialist, and any others who have co-operated in the diagnosis and treatment of the case concerned. It will be illustrated by apparatus, books, specimens, tests and methods.

The course will include subjects associated with recent researches, recent epidemic outbreaks and general diseases on which new observations have been made.

In order that the Practitioner may also have opportunities for personal study and practice, attendants on the course will

have the further advantage of admission for Medical Instruction for one month to any or all the departments of the Clinical Institutions included in the University.

FEE.—Three Guineas for the Course and Clinical work.

DAILY POSTGRADUATE STUDY.—For those who are able to devote several hours each day to Hospital practice, the University offers special facilities for Postgraduate work. Qualified Medical Practitioners may be appointed as *Clinical Assistants* for a period of one or more months. They may act as Assistants, if times permit, in more than one Department and in any of the Hospitals during their period of study. They will be entitled to the use of the Clinical Laboratories and Medical Library, and have the right to attend in all departments, including Operations, Postgraduate and ordinary Clinical Demonstrations and Post-mortem examinations.

FEE.—Three Guineas per month.

All inquiries and applications for admission should be addressed to the Director of Postgraduate Studies (Clinical Section), Pathological Department, University of Bristol.

The undermentioned are included in the Birthday Honours, and to them we offer our congratulations :—

C.B.E.—Lieut.-Col. and Brevet-Col. J. Paul Bush, C.M.G., Major (temp. Col.) J. Swain, C.B., Col. P. G. Stock, C.B., Temp. Lieut.-Col. J. H. Parsons, Capt. T. S. Hele.

O.B.E.—Major R. C. Clarke, Capt. R. S. S. Statham, Surgeon Lieut. A. E. Iles, Major (a/Lieut.-Col.) T. M. Carter, Capt. C. W. Wanklyn-James, Capt. C. C. Chesterman.

D.S.O.—Capt. (a/Lieut.-Col.) I. R. Hudleston, Capt. and Brevet-Major (a/Lieut.-Col.) P. S. Tomlinson.